

**DRAFT
ENVIRONMENTAL IMPACT
REPORT
FOR THE
MAYER HEIGHTS RESIDENTIAL
SUBDIVISION**





**DRAFT
ENVIRONMENTAL IMPACT
REPORT
FOR THE
MAYER HEIGHTS RESIDENTIAL
SUBDIVISION**

**Prepared for:
CITY OF OAKLAND**

January 1993



Digitized by the Internet Archive
in 2025 with funding from
State of California and California State Library

<https://archive.org/details/C124919500>

File No. ER90-75
Ref. No. PUD90-252
SCH #91063068

City of Oakland
Oakland, California

RELEASE OF REPORT FOR PUBLIC REVIEW

California Environmental Quality Act (CEQA)

DRAFT ENVIRONMENTAL IMPACT REPORT FOR:

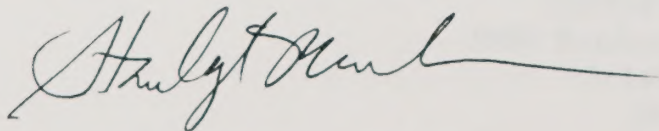
MAYER HEIGHTS RESIDENTIAL SUBDIVISION

The City of Oakland is hereby releasing this Draft Environmental Impact Report (EIR) for Mayer Heights Residential Subdivision, finding it to be accurate and complete and ready for public review. Members of the public are invited to respond to the EIR. Comments should focus on the sufficiency of the EIR in discussing possible impacts on the environment, ways in which adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors. Please address all comments to the Oakland City Planning Commission, Attention Stanley Muraoka, Acting Environmental Review Coordinator, Oakland City Planning Department, 1330 Broadway, Suite 310, Oakland, CA 94612. Comments should be received no later than 5pm, Friday, March 26, 1993.

- ☒ The City Planning Commission will conduct a public hearing on the Draft EIR on March 10, 1993 at 6:30 p.m. in the Garden Center, Lakeside Park, 666 Bellevue Avenue.
- ☒ After all comments are received, a Final EIR will be prepared and considered for acceptance by the City Planning Commission on (to be scheduled) at 6:30 p.m. in the Garden Center, Lakeside Park, 666 Bellevue Avenue.
- ☒ The Draft EIR is attached.
- ☐ The Draft EIR is available at the City Planning Department.

If you have any questions, please telephone the City Planning Department at 273-3941. Ask for Robin NiDana.

Alvin D. James
Director of City Planning



by: STANLEY MURAOKA
Acting Environmental Review Coordinator

DATE: January 25, 1993

EXECUTIVE SUMMARY

1. PROJECT DESCRIPTION

1.1 Project Site Location and Surroundings

1.2 Project Description and Purpose

1.3 Project Location Map

1.4 Project Description

1.5 Project Description

DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

MAYER HEIGHTS RESIDENTIAL SUBDIVISION

2. PROJECT DESCRIPTION AND PURPOSE

2.1 Project Description

2.2 Project Description

3. STUDY AREA, ENVIRONMENTAL SETTING, AND

EXISTING CONDITIONS

3.1 Study Area Description

3.2 Environmental Setting

3.3 Environmental Setting

3.4 Environmental Setting

3.5 Environmental Setting

3.6 Environmental Setting

3.7 Environmental Setting

3.8 Environmental Setting

3.9 Environmental Setting

3.10 Environmental Setting

Prepared for:

CITY OF OAKLAND

4. ENVIRONMENTAL IMPACT ANALYSIS

4.1 Environmental Impact Analysis

4.2 Environmental Impact Analysis

4.3 Environmental Impact Analysis

4.4 Environmental Impact Analysis

January, 1993

5. ENVIRONMENTAL IMPACT ANALYSIS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Environmental Impact Analysis

5.2 Environmental Impact Analysis

5.3 Environmental Impact Analysis

5.4 Environmental Impact Analysis

5.5 Environmental Impact Analysis

5.6 Environmental Impact Analysis

5.7 Environmental Impact Analysis

5.8 Environmental Impact Analysis

5.9 Environmental Impact Analysis

5.10 Environmental Impact Analysis

Prepared by:

CERTIFIED/EARTH METRICS

7000 Marina Boulevard, 4th Floor

Brisbane, CA 94005

(415) 742-9900

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
INTRODUCTION	vi
1. PROJECT DESCRIPTION	1-1
1.1 Project Site Location and Characteristics	1-1
1.2 Project Description and Background	1-1
1.3 Objectives of the Project Applicant	1-7
1.4 Regulatory and Permit Requirements	1-7
1.5 Intended Uses of the EIR	1-9
2. SUMMARY	2-1
2.1 Summary of Impacts and Proposed Mitigation Measures ..	2-1
2.2 Alternatives Evaluated	2-1
3. EXISTING SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES	3.1-1
3.1 Land Use and Planning	3.1-1
3.2 Visual/Aesthetics	3.2-1
3.3 Traffic and Parking	3.3-1
3.4 Geology	3.4-1
3.5 Hydrology/Drainage/Water Quality	3.5-1
3.6 Ecology/Biology	3.6-1
3.7 Air Quality	3.7-1
3.8 Public Services and Utilities	3.8-1
3.9 Noise	3.9-1
4. ALTERNATIVES TO THE PROPOSED PROJECT	4-1
4.1 No Project Alternative	4-1
4.2 Reduced Scale Alternative	4-2
4.3 Mitigated Alternative	4-4
4.4 Alternative Site	4-8
5. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ASSESSMENTS	5-1
5.1 Significant Environmental Effects Which Cannot be Avoided if the Project is Implemented	5-1
5.2 Growth-Inducing Impacts of the Proposed Project	5-2
5.3 Cumulative Impacts	5-3
5.4 Relationship Between Local Short-Term Use of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity	5-4
5.5 Effects Found Not to be Significant	5-5

TABLE OF CONTENTS (CONTINUED)

<u>Section</u>	<u>Page</u>
6. REFERENCES: ORGANIZATIONS, PUBLICATIONS AND PERSONS CONSULTED	6-1
7. PREPARERS OF THIS REPORT	7-1
8. APPENDICES	8-1
A. Initial Study	A-1
B. Letters in Response to the Notice of Preparation	B-1
C. Lot Data and Architectural Drawings of Proposed Residences	C-1
D. Supporting Traffic Data	D-1
E. Geotechnical Investigation (Nordmo Associates, Inc.) ...	E-1
F. Alameda Whipsnake Site Survey (Dr. Samuel McGinnis)	F-1
F-1. Biologist Qualifications and Study Methodology	F-10

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1.1-1 Regional Project Location	1-2
1.1-2 Local Setting of the Project Site	1-3
1.1-3 Project Location Map	1-4
1.2-1 Project Site Plan	1-5
3.1-1 Local Surrounding Land Uses	3.1-2
3.1-2 Regional Surrounding Land Uses	3.1-3
3.2-1 Photographs of the Project Area and Photosimulation of the Proposed Project	3.2-2
3.2-2 Location and Direction of Project Site Photographs	3.2-10
3.3-1 Regional and Local Roadways in the Project Vicinity	3.3-2
3.3-2 Intersection Configuration and Existing P.M. Peak Hour Traffic Volume at the Redwood Road/Skyline Boulevard Intersection	3.3-4
3.3-3 Project-Related Trip Distribution at the Redwood Road/Skyline Boulevard Intersection	3.3-8
3.3-4 Proposed Traffic Circulation on the Project Site and Off-Street Parking Areas Including Garage	3.3-9
3.3-5 Proposed Roadway Profile	3.3-10
3.3-6 Sight Distance Diagram	3.3-13
3.3-7 Cumulative Trip Distribution at the Redwood Road/ Skyline Boulevard Intersection	3.3-16
3.4-1 Project Location Map	3.4-2
3.4-2 Topography of the Project Site	3.4-3
3.4-3 State of California Special Studies Zone, Oakland	3.4-4
3.4-4 Major Fault Zones in the San Francisco Bay Area	3.4-5
3.4-5 Preliminary Grading Plan	3.4-8
3.4-6 Project Retaining Walls	3.4-9
3.5-1 Project Site Drainage and Topography	3.5-2

LIST OF FIGURES (CONTINUED)

<u>Figure</u>		<u>Page</u>
3.6-1	Generalized Vegetation and Drainage Map	3.6-2
3.9-1	State of California Noise Standards	3.9-2
4.2-1	Conceptual Site Plan for Reduced Scale Alternative	4-3
4.3-1	Conceptual Site Plan for the Mitigated Alternative	4-5
4.4-1	Alternative Site Location	4-7
C-1	Architectural Drawings of Proposed Residences	C-3

LIST OF TABLES

<u>Table</u>	<u>Page</u>
2.1-1 Summary of Significant Impacts and Recommended Mitigation Measures	2-2
3.3-1 Descriptions of Levels of Service for Signalized Intersections	3.3-5
3.3-2 Project Trip Generation	3.3-7
3.3-3 Safe Stopping Sight Distance, Redwood Road/Site Roadway	3.3-12
3.3-4 Cumulative Plus Project Trip Generation	3.3-15
3.3-5 Projected P.M. Peak Hour Levels of Service	3.3-17
3.4-1 Major Faults in the Project Area Vicinity	3.4-6
3.7-1 Violations of Air Pollution Standards at Monitoring Stations in the Project Vicinity, 1987 through 1990	3.7-2
3.7-2 Comparison of Project-Related Mobile Emissions to County Mobile Emissions	3.7-5
3.9-1 Existing and Predicted Sound Levels, Ldn	3.9-4
C-1 Lot Data	C-2

INTRODUCTION

PURPOSE AND INTENT

Pursuant to the California Environmental Quality Act of 1970 (CEQA), the lead agency, the City of Oakland, has determined that an Environmental Impact Report (EIR) is required for the proposed Mayer Heights Subdivision. The purpose of the EIR is to provide objective information to the lead agency, responsible and trustee agencies, public decision makers and the general public regarding potential environmental effects from a proposed project's implementation. When acting on the application, the lead agency must adopt recommended mitigation measures to reduce adverse impacts to less-than-significant levels where feasible and may consider alternatives to the project. Identified significant adverse impacts which cannot be mitigated to below a level of significance are required to be recognized by a statement of overriding consideration, indicating that the benefits expected from the project more than offset the identified unavoidable impacts.

This EIR has been prepared according to CEQA, CEQA Guidelines of the State Resources Agency, and the City of Oakland CEQA procedures. CEQA directs that the EIR should focus upon the significant environmental effects of a project, defining a significant effect as one which has "a substantial adverse impact on the environment." CEQA Guidelines Section 15143 indicates that "significant effects should be discussed with emphasis in proportion to their severity and their probability of occurrence." However, adverse impacts which are less-than-significant may also be identified.

Based on the Initial Study (Appendix A) and other information provided by the lead agency, the areas of potential environmental impact are: (1) Land Use and Planning; (2) Visual/Aesthetics; (3) Traffic/Parking; (4) Geology; (5) Hydrology/Drainage/Water Quality; and (6) Ecology/Biology. Air Quality, Public Services/Utilities, and Noise were not anticipated to be areas of environmental impact, and briefer discussions of these areas are included. Focusing the EIR based upon information provided by the lead agency conforms to CEQA Guidelines Section 15143.

Impacts that were identified as less than significant in the Initial Study were not analyzed in this EIR. These impact categories are identified in Section 5.4, "Effects Found Not to be Significant."

Section 15125(c) of the CEQA Guidelines directs that the discussion of mitigation measures shall distinguish between the measures that are proposed by the project proponents, and those proposed by the preparers of the EIR. Accordingly, under Section 2, "Summary," mitigation measures proposed by the project applicant are indicated as "proposed."

The City of Oakland circulated the Notice of Preparation (NOP) for this EIR on June 7, 1991. The public comment period ended on August 21, 1991. Letters of response to the NOP were received and are included in Appendix B.

REPORT ORGANIZATION

Section 1 details the project description, including the project applicant's proposal for the site, the site location, and the site characteristics. Also discussed are the objectives of the project applicant, regulatory and permit requirements, and intended uses of the EIR.

Section 2 is a summary presented in table format of the significant adverse impacts that are identified in this Draft Environmental Impact Report. Mitigation measures to reduce these impacts to a less-than-significant level, when possible, are identified. The expected significance level after mitigation is also identified in the summary table.

Section 3 consists of discussions and analysis of the areas of potential environmental impacts (listed above). Each section consists of a discussion of the existing setting, environmental impacts, and mitigation measures.

Section 4 includes a discussion of alternatives to the proposed project, including the No Project Alternative, Reduced Scale Alternative, Mitigated Alternative, and Alternative Site.

Section 5 consists of CEQA Assessments including 1) Significant Environmental Effects which Cannot be Avoided if the Project is Implemented, 2) Growth-Inducing Impacts of the Proposed Project, 3) Cumulative Impacts, and 4) Effects Found Not to be Significant.

Sections 6, 7, and 8 are references, preparers of this report, and appendices, respectively.

1. PROJECT DESCRIPTION

1.1 PROJECT SITE LOCATION AND CHARACTERISTICS

The project site is located in the City of Oakland in the County of Alameda. The regional setting is shown in Figure 1.1-1. The 5.8-acre site is located on the east side of Redwood Road, 1,000 feet north of Skyline Boulevard. The site is located east and south of Redwood Regional Park, north of Skyline Ranch, and west of a ridgetop development radiating from Balmoral Drive. The site is within the relatively undeveloped Redwood Canyon which currently provides a scenic entryway to the regional open space lands operated by the East Bay Regional Park District (EBRPD) and by the East Bay Municipal Utilities District (EBMUD). The EBRPD has been authorized to negotiate for the purchase of the site property as an addition to the District's parklands. As of this time, however, the site remains in the ownership of the project applicant.

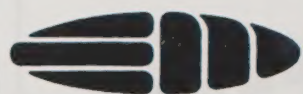
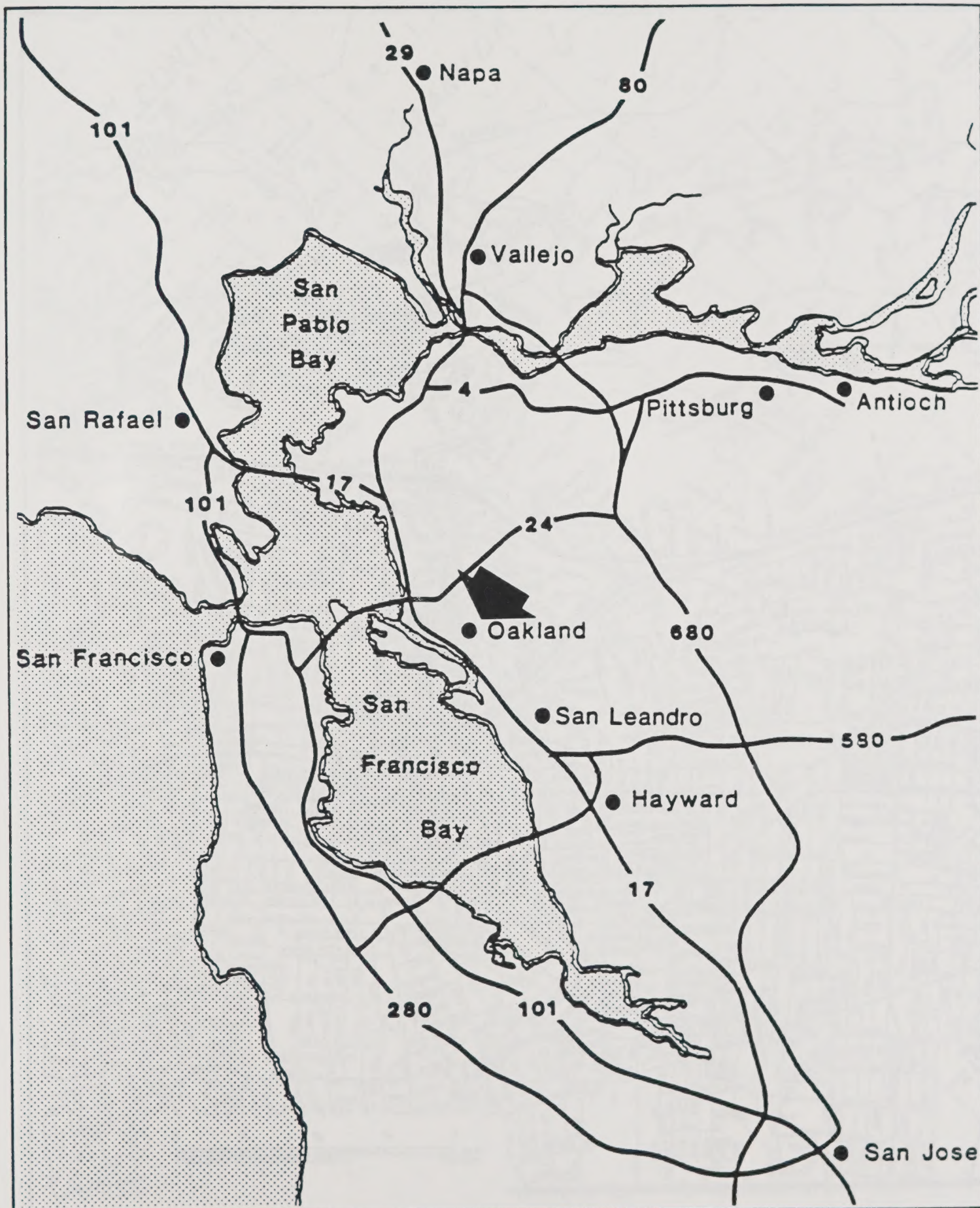
The steep project site is a narrow extension of woodland/grassland habitat that is connected to the heavily wooded and mostly undeveloped Redwood Canyon, which stretches for miles north and east of the project site. The local setting of the project site is shown in Figures 1.1-2 and 1.1-3. The undeveloped site is located on a steep slope (an average of 60 percent slope) and supports woodland, grassland, and scrub habitats. Plant communities found on the project site include coast live oak woodland, coastal scrub, non-native grassland, and eucalyptus woodland. The eucalyptus and grassland communities are dominated by introduced species. These communities are concentrated in the western most portion of the site, proximate to Redwood Road. Grassland also dominates the steepest areas on the site, along the eastern perimeter.

The west branch of Redwood Creek, which supports a sensitive population of native rainbow trout, is located immediately across Redwood Road from the site. This creek crosses underneath Redwood Road just north of the site, so that overland drainage from the site's northwestern tip drains directly into the creek. The rest of the site's surface flow also enters Redwood Creek.

There is an intermittent drainage course which crosses the northern half of the project site. The topography in the central and southern portions of the site indicates that runoff from the remaining areas is concentrated into two ephemeral drainages. Runoff is directed by these drainages down the slope of the site to the edge of Redwood Road. A culvert collects the runoff and carries it under the road to Redwood Creek which parallels Redwood Road. Redwood Creek drains into the Upper San Leandro Reservoir near the intake tunnel for the plant which filters water prior to its entering the drinking water distribution system. San Leandro Reservoir provides drinking water to Oakland and other East Bay communities.

1.2 PROJECT DESCRIPTION AND BACKGROUND

The project site has been the subject of one previous proposal for a four-lot subdivision. There has been some prior grading on the site, apparently without full permit approvals (NiDana, 1992). In the first instance, grading occurred in an area near the proposed project roadway exit. Currently, this portion of the site is characterized by disturbed vegetation (see Section 3.6,



earth metrics



FIGURE 1.1-1 REGIONAL PROJECT LOCATION

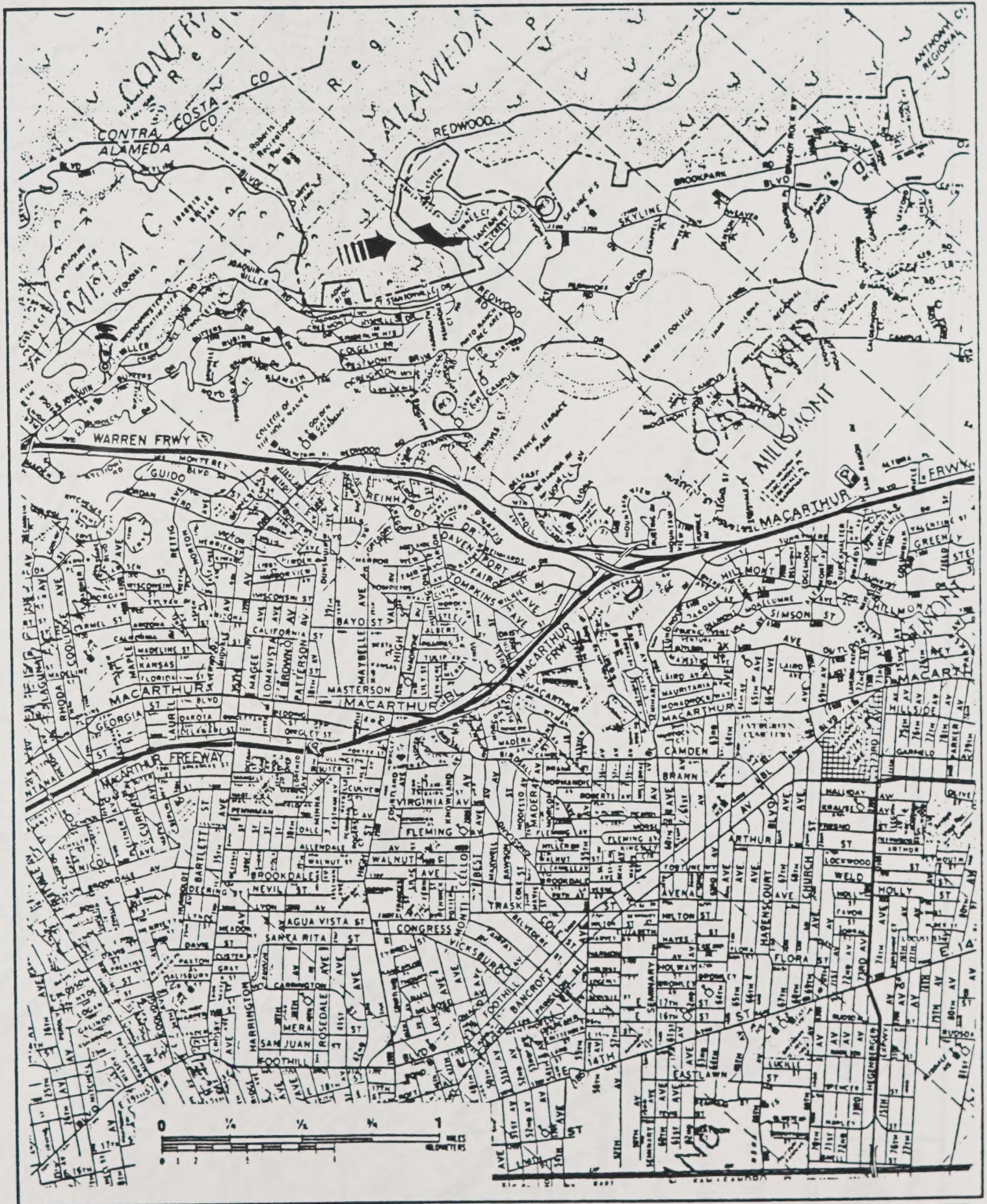
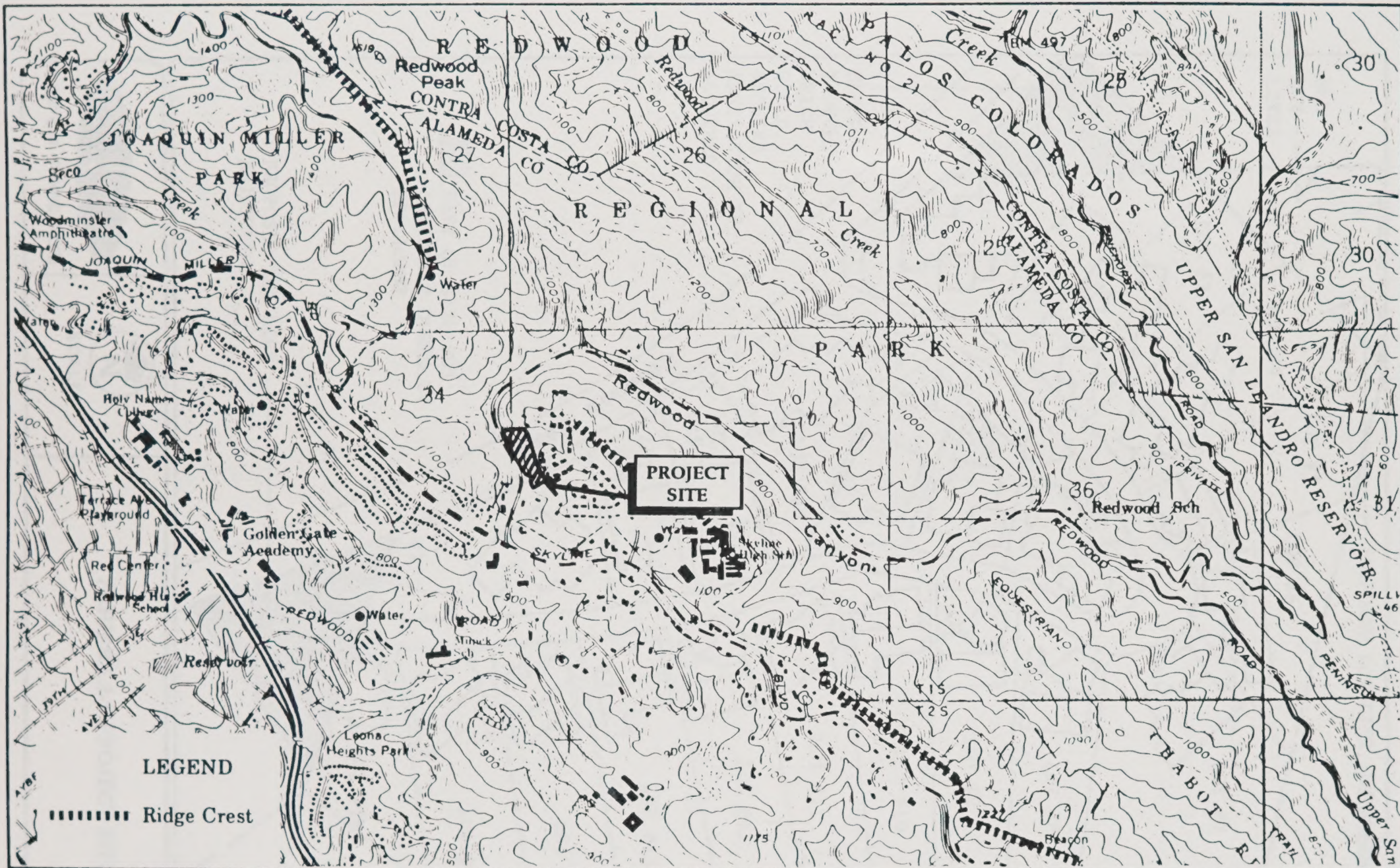
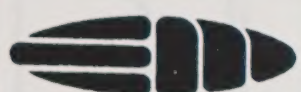


FIGURE 1.1-2 LOCAL SETTING OF THE PROJECT SITE



 earth metrics	 SCALE	FIGURE 1.1-3 PROJECT LOCATION MAP Source: USGS Oakland East 7.5 Minute Quadrangle
--	--	--

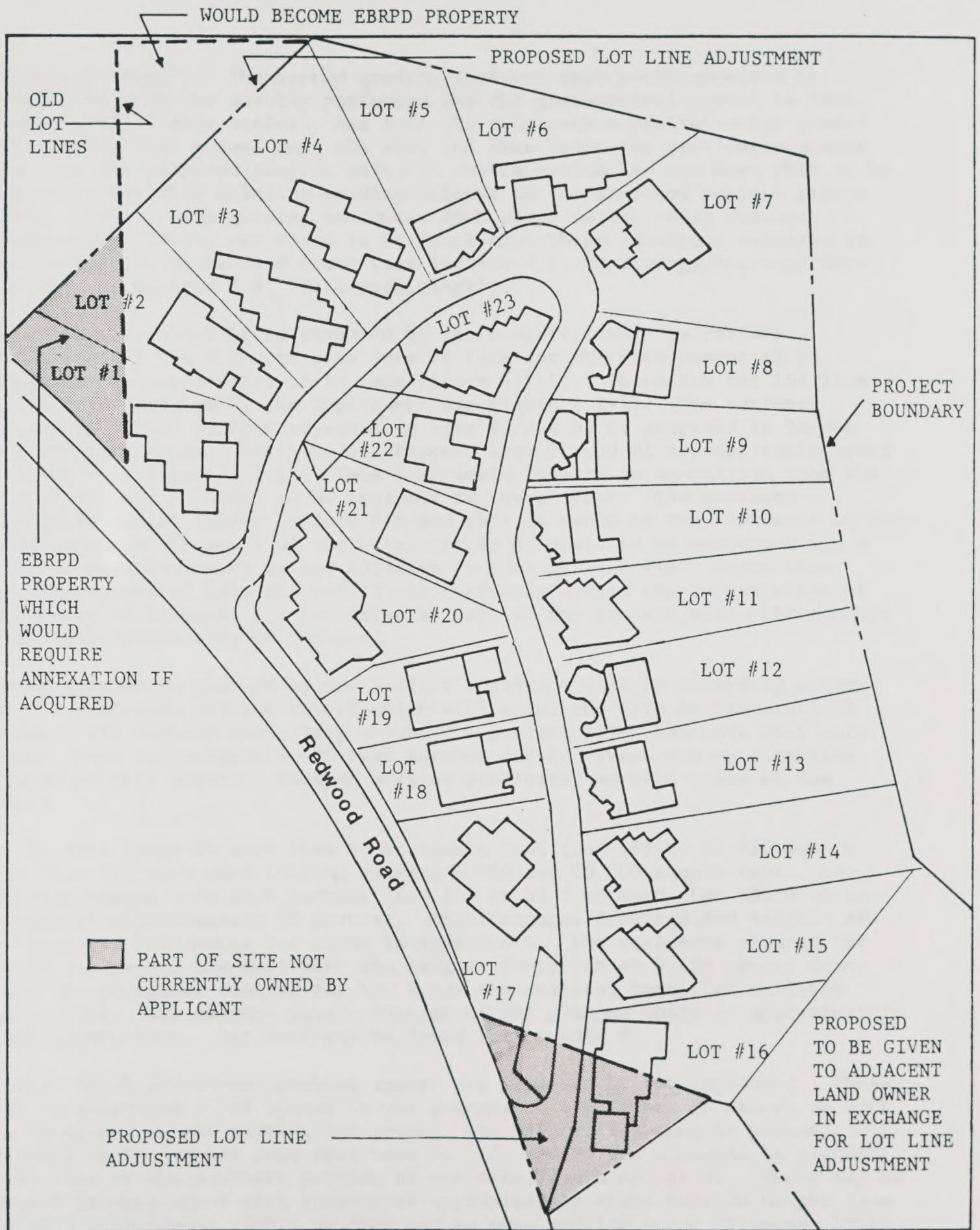


FIGURE 1.2-1 PROJECT SITE PLAN

"Ecology/Biology"). The second grading incident apparently occurred in association with the testing performed for the geotechnical report in 1991 (Jones, 1992). This activity has left the site with a preliminarily graded dirt roadway that curves onto the site and then joins the previously graded area near the proposed project exit. A determination has not been able to be made as to how this existing grading relates to the proposed project grades (Jones, 1992). Both grading instances took place during rainy seasons (Lindenmeyer, 1992), and there is evidence that these incidents resulted in erosion impacts to Redwood Creek (see Section 3.5, "Hydrology/Drainage/Water Quality" and Section 3.6, "Ecology/Biology").

The current proposal being advanced by the property owner is for the subdivision of the 5.8-acre site into 24 lots for the development of 23 single-family residential units (see Figure 1.2-1). There are two lot line adjustments proposed by the applicant (see Figure 1.2-1). The northern triangular parcel of land adjacent to lots #3 and #4 is proposed to become part of EBRPD lands. Portions of proposed lots #1 and #2 are currently owned by EBRPD (see Figure 1.2-1). This land would require an annexation into the City of Oakland in order to be included in the project. The southern triangular parcel (parts of lots #16 and #17) is owned by the landowner of the horse ranch to the south of the site. It is proposed to be exchanged for a piece of property south of and adjacent to lots #15 and #16. Since this property (parts of lots #16 and 17) is currently within the jurisdiction of the County of Alameda, its inclusion as part of the project site will require annexation to the City of Oakland.

The residences as planned by the project applicant will be served by a one-way, 16-foot-wide private street which will enter the site at its southern boundary off Redwood Road, loop around the project site, and then exit onto Redwood Road approximately 400 feet further north. There are no sidewalks planned on this street. Parking will be prohibited on both sides of the street.

The 23 lots range in size from 5,141 square feet (Lot 18) to 13,860 square feet (Lot 7), with most falling between 8,000 and 10,000 square feet. Lot coverage ranges from 14.4 percent (Lot 13) to 38.7 percent (Lot 18) with an average of approximately 23 percent. Architectural drawings and heights of the proposed residences are shown in Appendix C. The residence planned for Lot 20 represents the unit with the largest footprint at 2,698 square feet, while the residence planned for Lot 5 has the smallest footprint at 1,430 square feet. The average square footage of the planned units is approximately 1,889 square feet. Lot data may be found in Appendix C.

A total of 88 off-street parking spaces are proposed by the applicant. These will be comprised of 48 spaces in the garages of the homes, 24 spaces on lots, and 16 spaces in two parking lot areas. One parking lot area is planned adjacent to the access road near Lots 21, 22, and 23 and a second is planned in an area in the southern portion of the site, south of Lot 17. These may be covered parking areas with structures approximately eight feet in height (see Figure 1.2-1) (Jones, 1991) or they may be open parking areas (Simmons, 1992). See Figure 3.3-4 for location of all off-street parking spaces.

The proposed project will also include construction of sanitary sewer lines and a pump station, as well as a storm drain system and water lines to serve the project site.

Specific drainage and landscaping plans have not been furnished by the applicant at this time, but will be required by the City of Oakland. A preliminary grading plan with areas of cut and fill indicated is shown in Figure 3.4-5. Retaining walls will be required. Most of the retaining walls will be part of the proposed structures (see Figure 3.4-6).

Construction is expected to be done in a phased manner with road construction and utility improvements being installed first. Construction of homes will be phased depending on demand and economic considerations (Simmons, 1992).

1.3 OBJECTIVES OF THE PROJECT APPLICANT

The project applicant, Mayer Development Company of San Leandro, California is requesting approval of the subdivision of land and a Planned Unit Development (PUD) permit. Their objective is to allow development of 23 single-family residential units on the 5.8-acre parcel to optimize the scenic opportunities to residences due to topographic features of the site.

1.4 REGULATORY AND PERMIT REQUIREMENTS

FEDERAL AGENCIES

U.S. Army Corps of Engineers (USACE). Under the Federal Water Pollution Control Act of 1972, as amended (Clean Water Act 1977, Section 404) the USACE, a branch of the U.S. Army, regulates the disposal of dredged or fill materials into "waters of the United States or adjacent wetlands." Preliminary indications are that the placement of fill in the northern intermittent stream and the second drainage swale on the project site would require authorization from the USACE (High, 1992). The type of authorization required can be in the form of a Nationwide Permit or an Individual Permit to be determined by the USACE. Any widening of Redwood Road that would impact Redwood Creek would also require permits from the USACE. The Fish and Wildlife Coordination Act of 1966 requires the USACE to consult with the U.S. Fish and Wildlife Service and the California Department of Fish and Game during processing of a Department of the Army permit pursuant to Section 404 of the Clean Water Act. The USACE regulatory program requires the district engineer to give full consideration to the views of these agencies in evaluating a permit application.

STATE AGENCIES

California Department of Fish and Game (CDFG). The CDFG, a division of the State Resources Agency, is charged with protecting and conserving the state's fish and wildlife resources including their supporting habitats and ecosystems. The CDFG policies support wetland resource protection and adequate compensation for wetland losses for those projects for which it can be demonstrated that there is "no feasible less environmentally damaging alternative location or design for the type of project being considered within a wetland." The test for adequate compensation is that the project or action

does not result in either a net decrease in the wetland acreage, or a net decrease in the wetland habitat values, which existed prior to project implementation.

The CDFG also has direct jurisdiction pursuant to Fish and Game Code Sections 1601 to 1603 in regard to any proposed activities which will divert, obstruct, or change the natural flow or bed of any river, stream, or lake designated by the department. Sections 1601 to 1603 allow the CDFG to review the project and propose reasonable modifications to the proposed construction for the protection and continuance of a fish or game resource that may be substantially adversely affected by such construction. CDFG comments are presented in a Streambed Alteration Agreement. If mutual agreement between the CDFG and the affected party is not reached, agreement will be reached through an arbitration procedure to be completed prior to construction of the proposed project.

Fish and Game Code Section 5650f gives the CDFG jurisdiction over the input of all deleterious substances, such as silt resulting from construction activities, into the waters of the State of California. The CDFG has jurisdiction over all drainages identified on U.S. Geological Survey (USGS) 7.5 minute topographical maps by blue solid or dotted lines. In addition, intermittent drainages not identified on USGS maps may be under the department's jurisdiction if they support significant riparian vegetation. Fish and Game Code Section 1601 to 1603 apply to the west branch of Redwood Creek located across Redwood Road from the project site, as well as the intermittent drainage swale in the northern portion of the property and the ephemeral drainage to the south of the intermittent drainage (Palmisano, 1992).

State Water Resources Control Board. The State Water Resources Control Board is the state regulatory committee responsible for surface and groundwater quality. It regulates all California laws under the Porter-Cologne Water Quality Control Act as well as the Federal Clean Water Act. Nine regional water quality control boards (RWQCB) promulgate water quality standards, establish wastewater discharge requirements and carry out water pollution control programs in accordance with the policies, and under the supervision of the state board. Water quality based effluent limits for individual projects are established by the RWQCB as part of the National Pollutant Discharge Elimination System (NPDES) permit procedure. The project applicant will be required to obtain a construction storm water permit under the NPDES permitting program. The Regional Water Quality Control Board (Region 2) will make the determination as to whether a general permit or individual permit will be required.

REGIONAL AGENCIES

East Bay Regional Park District. The park district (Fisheries Division) will review the project applicant's erosion control plan to ensure that project-related erosion will not cause sedimentation in the west branch of Redwood Creek, which could adversely affect steelhead rainbow trout spawning areas.

County of Alameda Local Agency Formation Commission. The Local Agency Formation Commission (LAFCO) is a Responsible Agency under CEQA, as it must

approve or deny the proposed annexations required as a result of the lot line adjustments (see Section 1.2 for a discussion of the lot line adjustments) if requested by the city, or if petition application is filed by the land owner should the city not request the annexation. LAFCOs are responsible for coordinating logical and timely changes in local governmental boundaries, conducting special studies which review ways to reorganize, simplify, and streamline governmental structure, and determining spheres of influence for each city and special district within each county. LAFCO's efforts are directed to ensure that services are provided efficiently and economically while agricultural and open-space lands are protected (Alameda County Local Agency Formation Commission, 1991).

County of Alameda. The proposed site plan includes two small triangular portions of land that are proposed to become part of the project property as a result of lot line adjustments. This land is currently under the jurisdiction of the County of Alameda and would require annexation to the City of Oakland. The County is also responsible for the portion of Redwood Road that is adjacent to the project site, and therefore the County would have jurisdiction over matters concerning the roadway, including traffic safety and road maintenance.

City of Oakland. In addition to the Zoning Ordinance and the City of Oakland General Plan, the project will be required to comply with the following permits and regulations: the Subdivision Map Act Regulations, the Grading Ordinance, the Tree Preservation Ordinance, and the requirements of the Building, Housing Land and Resource Development, Fire Prevention and other sections of the Oakland Municipality Code.

1.5 INTENDED USES OF THE EIR

This is a project EIR and, accordingly, studies the possible environmental impacts from the approval, construction, and operation of the proposed project. This EIR is intended to be the environmental document for any decisions made or approvals issued by the City of Oakland as the lead agency, and any responsible or interested federal, state, or local agencies. It is also intended to provide the general public with the environmental information necessary to provide public input into the proposed project, as required by the California Environmental Quality Act (CEQA), Public Resources Code, Section 21000 et seq.

2. SUMMARY

2.1 SUMMARY OF IMPACTS AND PROPOSED MITIGATION MEASURES

This report examines the environmental impacts of the proposed Mayer Heights Residential Subdivision project. Significant adverse impacts associated with project implementation, as well as mitigation measures to reduce these impacts are summarized in Table 2.1-1. Following the listing of the mitigation measure(s) for that impact, the level of significance after implementation of the mitigation measure(s) is indicated. "SU" indicates that there are significant unmitigable impacts if the project is implemented as proposed. "LS" indicates that after mitigation the project impacts are less-than-significant. The criteria for determining the level of significance of a particular impact are set forth in each subsection of Section 3 of the EIR. The mitigation measures presented are designed to reduce significant impacts to less-than-significant levels. The City of Oakland will determine which mitigation measures will be made a condition of the project; however, the California Environmental Quality Act (CEQA) generally requires that all feasible mitigation measures for significant adverse impacts be implemented unless the lead agency determines there are overriding considerations.

2.2 ALTERNATIVES EVALUATED

The alternatives evaluated in this report are 1) No Project, 2) Reduced Scale Alternative, and 3) Mitigated Alternative. In addition, one alternative site for the proposed project is discussed.

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.1 LAND USE AND PLANNING</u>		
3.1-A. The proposed project would alter the current use of the site from open space to the subdivision of 23 residential lots and the eventual construction of single-family residences and an access road to serve the development.	The alteration of the current use of the site from open space adjacent to the regional park open space network to residential cannot be mitigated below a level of significance.	SU
3.1-B. The proposed project would create visual impacts from public view corridors in Redwood Regional Park. Views to motorists along Redwood Road would be altered from the current rural park-like corridor.	Visual impacts of the proposed project as viewed from public view corridors such as Redwood Regional Park and Redwood Road cannot be mitigated below a level of significance unless there are modifications in the site plan including reduction in density of the proposed residences. The project should be redesigned to avoid visually sensitive areas along Redwood Road as well as visually sensitive view corridors from Redwood Park. A balance will need to be achieved since locating homes further back from Redwood Road (and thus preserving the park-like corridor along Redwood Road) makes them more visible from distant view corridors such as hiking and equestrian trails in Redwood Regional Park. The project redesign should also avoid development in the northern intermittent stream, a significant	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed		
(LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	visual (as well as biological) feature of the site.	
<u>3.1-C.</u> Due to construction activities and the intensification in land use, the proposed project could cause sedimentation in Redwood Creek, adversely affecting its water quality and the sensitive species, the steelhead rainbow trout, which spawns in the creek.	The impact of the proposed project on water quality and sensitive species in Redwood Creek can be reduced with careful construction practices and other hydrological mitigation measures (see Section 3.5, "Hydrology/Drainage/Water Quality" and Section 3.6, "Ecology/Biology").	LS
<u>3.1-D.</u> Project ingress and egress as currently designed cannot be accommodated safely by the current roadway geometry of Redwood Road. Modifications to the roadway geometry would have significant impacts to Redwood Creek and to the Redwood Road corridor. Modifications would also entail significant grading, and retaining walls along Redwood Road.	In order to ensure the safety of southbound traffic on Redwood Road in the project area, the widening of the portion of Redwood Road in the project area to create a left turn pocket and/or the redesign of the project roadway entrance point will be necessary. It is recommended that the project applicant in consultation with the City of Oakland Traffic Engineer and the County of Alameda Traffic Engineer explore the feasibility of widening the east side (project site) of Redwood Road only. If it is determined to be infeasible to widen only the east side of Redwood Road and the west side must also be widened, there would be significant impacts to the biological resources of Redwood Creek. The project proponent	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	should try to relocate site access and egress points in order to increase the sight distance to city standards. Relocation of project access points is the only means of mitigation that will avoid further impacts to the Redwood Road Corridor.	
<u>3.1-E.</u> The proposed project is not consistent with General Plan land use policies regarding harmony of scale with existing surrounding buildings, scale and intensity of new development relating sensitively to the natural setting and the requirement of the designation of open space areas.	Modifications are required to the site plan in order for the proposed development to be consistent with General Plan policies regarding harmony of scale with existing surrounding buildings, scale and intensity of new development relating sensitively to the natural setting, and the requirement of designation of open space areas. This may require a reduction in the number of units planned for the site.	SU
<u>3.1-F.</u> All of the proposed project lots are smaller than the minimum of 22,216 square feet required by the prevailing lot size requirements of the Oakland Municipal Code (OMC, Section 7-4.31.6). Several of the lots are inconsistent with the minimum width requirement of 60 feet at the front building line as required by the hillside subdivision regulations (OMC,	The project should be redesigned to meet the requirements of the Oakland Municipal Code regulations for prevailing lot size and the new hillside subdivision regarding lot areas for lot widths and to meet the zoning code requirements for building heights.	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
Section 7-4.54). Several residences exceed the building height limitations of the Zoning Code.		
<u>3.2 VISUAL/AESTHETICS</u>		
<u>3.2-A.</u> The proposed project will change the visual character of the hillside that rises above Redwood Road. It would change the natural visual environment of these hills as viewed from important public view corridors such as Redwood Road and Redwood Regional Park. It would also change the private views from local residences and the horse ranch.	Visual impacts of the project cannot be mitigated below a level of significance except through revisions in the site plan. The site plan should be revised to reduce the visual impacts to both the Redwood Road view corridor and view corridors for Redwood Regional Park. Reducing the scale and intensity of development and avoiding sensitive view corridors including eliminating development in the northern drainage swale, as well as designing appropriate fire resistant vegetative screening would mitigate this significant impact (see "Mitigated Alternative," Section 4.3, for example). Exterior building materials should be fire resistant materials that are natural in appearance, in order that the development remain subordinate to the site's natural setting. The architectural design characteristics of the residential units	SU
(SU) - Significant unavoidable impacts if project is implemented as proposed		
(LS) - Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	should be evaluated by the Design Review Committee.	
	The project applicant should submit a landscape plan to the city for approval. The landscape plan should serve to soften the visual impacts of the development, and should utilize native drought tolerant and fire resistant vegetation.	
<u>3.2-B.</u> Introduction of nighttime lighting to the project site will increase the site visibility to local residents and motorists. Additionally daytime glare from windows attributable to the development will make the site more visible, and may be annoying to users of nearby park trails.	Exterior lighting should be minimized. Lighting that is necessary should be of low profile design. Low pressure sodium vapor lamps should be used in the development. Reflective surfaces should be moderated and not used in large expanses in a single plane. Reflective surfaces potentially visible from Redwood Park should be required to have non-reflective coatings.	LS
<u>3.2-C.</u> Introduction of aboveground utility or telephone lines in the hillsides noticeable to off-site view corridors would result in a significant adverse impact upon the visual quality of the Oakland Hills.	Where feasible, utility lines should be undergrounded.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.2-D.</u> The proposed project is inconsistent with General Plan policies relating to the conservation of visual resources and requiring development to be related sensitively to the natural setting and the requirement that open space be reserved for every development of substantial size in the Hills.	General Plan inconsistency cannot be mitigated below a level of significance except through revisions in the site plan including reduction in density and scale of residences and the provision of open space areas.	SU
<u>3.3 TRAFFIC/PARKING</u>		
<u>3.3-A.</u> The project site plan indicates that a 16-foot-wide one-way roadway will provide project internal circulation. This width is not consistent with city regulations and will increase the potential for pedestrian, bicycle, and vehicular conflicts.	The project roadway should be redesigned to include the minimum required road width of 40 feet with 30 feet of paved roadway and two five-foot wide sidewalks on either side of the street (Oakland Municipal Code, Sections 7-4.53 and 7-4.54). This will increase grading impacts.	LS
	There is adequate off-street parking and on-street parking should be prohibited in order to reduce pedestrian, bicycle, and vehicular conflicts.	
<u>3.3-B.</u> Project traffic exiting the site and heading southbound on Redwood Road will find it difficult to join the flow of traffic due to a lack of visibility at the proposed intersection.	The design of the project exit point should incorporate a "STOP" sign and the project exit area should be widened to provide a 300 foot safe sight distance for traffic from the site turning to travel southbound on Redwood Road.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
There is inadequate sight distance for safe stopping for southbound traffic approaching southbound cars waiting to make a left-hand turn into the project entrance.	The project sponsor should redesign entrance and exit drives to provide adequate sight distance per City of Oakland standards. The project proponent may seek roadway widening consultation with the engineers of the City of Oakland and the County of Alameda to provide adequate sight distance and sufficient space to provide a left-turn pocket near the project entrance. If it is determined that in order to provide adequate sight distance and sufficient room for a left-turn pocket on southbound Redwood Road, the western side of Redwood Road would need to be widened. Significant impacts to sensitive creek habitats and aquatic species would result depending on the alternation. Redesign of on site drives is the only means of mitigation that may avoid impacts to the Redwood Road Corridor.	SU
<u>3.4 GEOLOGY</u>		
3.4-A. Grading of the steep project site slopes could result in slope instability and site erosion.	A certified geotechnical engineer should review the grading, drainage, and foundation plans for the proposed project. A grading plan will be required to be submitted to the Oakland Public Works Department and must meet	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	with the city's approval. The grading plan should conform to all recommendations in the geotechnical and soils report. Issuance of grading permits will be partially dependent on whether the grading plan avoids slope stability concerns. A certified geologist should be required to be present on site during all phases of project grading, excavation, and pier and foundation wall installation to ensure that recommendations in the geotechnical report are adhered to. The proposed project's design and construction should follow the recommendations presented in Nordmo Associates' geotechnical investigation including recommendations concerning slope-cut, foundation design, drainage provisions, and retaining walls. These recommendations include the following: Cut slopes in dense bedrock should be no steeper than 1 1/2 H to 1V. Cut slopes in stiff to hard subsoil should be no steeper than 2H to 1V.	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	The proposed structures should be supported on properly designed, cast-in-place, reinforced concrete pier-and-grade beam foundations. Detailed foundation design parameters for individual lots will be dependent on the individual lot location and building pad configuration and elevation (cut, fill, or sloping pad). Proper and adequate surface and subsurface drainage provisions should be an integral part of the proposed development; including a drainage system behind all retaining walls. Soil retaining walls should be designed to resist lateral soil pressure dependent on the slope uphill of the wall. Retaining walls that will be part of the proposed structures should be supported on piers that should be designed to resist sliding and vertical loading.	LS
<u>3.4-B.</u> Due to the presence of very erodible soils on site, there is the potential for significant adverse impacts due to	Implement all erosion mitigation measures as recommended in Section 3.5 "Hydrology/Drainage."	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
accelerated erosion, particularly during the construction phase.	The structures of the proposed project will be required to meet the standards of the Unified Building Code (UBC). The UBC standards ensure structural designs that can withstand the maximum expected ground accelerations.	
The General Plan indicates that development involving significant alteration of natural land forms or surface conditions should generally be discouraged on slopes greater than 30 percent. When it does occur slopes should be planted to hold eroded soil in place.	The landscaping plan of the proposed project should be designed to reduce erosion and to cover areas of alteration of natural land forms as specified in the General Plan. Any remaining bare areas on site resulting from prior grading activities should also be revegetated and stabilized. The applicant should be required to submit the landscaping plan to the city for approval. In addition a homeowner's association should be formed to ensure adequate maintenance of the landscaping. Refer to Section 3.5, "Hydrology/Drainage" for additional mitigation measures relating to erosion.	LS
<u>3.4-C.</u> The proposed site will most likely experience intense ground shaking during the life of the project due to seismic activity. This ground shaking could result in material sloughing and severe structural damage.		LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.5 HYDROLOGY/DRAINAGE/WATER QUALITY</u>		
<u>3.5-A. Drainage.</u> Construction of residences, the proposed project roadway, and other paved surfaces on site will increase the amount of impervious surfaces on the site. Construction will also alter the natural drainage of the site.	The project applicant will be required to have a civil engineer compute the peak rate of runoff in order to correctly size the storm drain system to meet city standards. The storm drain system would require the city's review and approval. The storm drainage system and landscaping of the proposed project would be designed to reduce erosion by limiting bare areas and controlling runoff on exposed soil. All runoff should be controlled and directed away from exposed soils and into existing natural drainages or properly engineered drainages. Eave gutters and downspouts should be installed to collect roof water runoff with outlet pipes from the downspouts directed to appropriate outlet locations. Energy dissipators should be placed at storm drain outfalls to minimize erosion and scouring. Riprap should be provided at all intake structures. Any paved surfaces overhanging	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
Alteration of the two most northern drainages on the site will require a Streambed Alteration Agreement from the California Department of Fish and Game.	unpaved slopes should be engineered to prevent storm water from flowing off and creating new drainageways. All sheet flow should be directed to the storm drain system.	Permanent use of sediment traps should be employed to contain sediments originating on the developed site before they enter Redwood Creek. The plan for the design and maintenance of these sediment traps should be included in the erosion control plan to be submitted to the city prior to commencement of construction activities on the site.
Placing fill in the two most northern drainages will require authorization from the U.S. Army Corps of Engineers, under Section 404 of the Clean Water Act.	The California Department of Fish and Game strongly recommends that the most northern drainage be preserved and that the second drainage also be preserved if at all possible. If this is not possible, mitigation would be required that results in no net loss of wetlands or habitat value (see full discussion in Section 3.6, "Ecology/Biology").	The applicant should consult with the U.S. Army Corps of Engineers regarding the proper permitting required.
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.5-B. Sedimentation.</u> In the short-term, construction and grading activities will require leaving bare soils on site. Because of the extremely steep slopes and the severe erosion hazard of the soils, exposed soils could be significantly eroded. This could result in significant siltation downstream of the site which would damage the spawning beds currently used by sensitive rainbow trout. Silt could also be carried significant distances where it could reach EBMUD's drinking water filter plant intake in the San Leandro Reservoir near the inlet from Redwood Creek.	The site erosion control plan should be submitted to the City of Oakland and the East Bay Regional Park District for approval prior to commencement of any grading on the site. The plan should incorporate strict erosion control measures in order to adequately control the severe erosion hazard from the Millsholm soils on the site's steep slopes. The erosion control plan should be designed pursuant to the guidelines of the Association of Bay Area Governments. Grading and excavation activities must be performed during the dry season only and should be prohibited between October and May. Bare areas should be mulched and planted with vegetation before the wet season begins. Strippings of vegetation and organic topsoil during construction should be removed from the site or placed such that they will not create debris flow or erosion hazards. Temporary devices such as diversion dikes, hay bales, silt fences, and plastic sheets should be used to control runoff on exposed areas.	LS LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	Before grading and construction commences, sediment traps should be installed on the site at all points of entry into Redwood Creek. Sediment traps should be designed to contain any and all erosion that occurs on site before it enters the creek.	
<u>3.5-C. Water Quality.</u> Additional pollutants will be introduced into the drainage system and Redwood Creek since the proposed project's drainage system will allow its storm drainage system to empty into Redwood Creek. The diversion of drainage out of natural drainage courses and/or the collection of flows from impervious surfaces, has been shown by several studies to increase the levels of some pollutants, most notably metals, that can be toxic to fish and other aquatic life. Storm water runoff from urban development frequently exceeds water quality objectives of the State Water Resources Control Board for copper, lead, and zinc and storm water runoff from urbanized areas tends to be toxic to organisms.	A terraced cascade of vegetated retention ponds or some more suitable technology should be incorporated into the project's storm water system design. The ponds would allow site runoff to percolate into the soil and most metals and other organic constituents would be removed. The retention ponds or other technology should be designed to retain the amount of runoff expected from a 10-year storm event. The Department of Fish and Game, the Regional Water Quality Control Board (Region 2), and the City of Oakland should approve the design of the ponds and the plan for ongoing maintenance of the terraced ponds. A provision for responsibility for implementation of the maintenance plan should be included in the CC&Rs for the project.	LS
Water quality impacts to Redwood Creek from potential	While mitigation measures can reduce water quality impacts to	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
catastrophic event (increased car accidents, dumping in the creek, etc.) associated with more intense human activity in the creek vicinity are expected to cumulatively have a significant adverse impact on the water quality of Redwood Creek.	Redwood Creek from activities on the project site, they cannot reduce the impact of potential catastrophic events associated with more intense human activity in the creek vicinity (these events could include for example, increased car accidents, dumping into the creek, and other such events). These catastrophic events are expected to cumulatively have a significant adverse impact on the water quality of Redwood Creek that is unmitigable. This would be a significant unavoidable impact of implementation of the proposed project. All storm drains constructed as part of the proposed project should be labeled either by stamping the concrete curb or by a posted sign to indicate that the drain flows into Redwood Creek which supports sensitive wildlife species including rainbow trout. The sign should indicate if possible that only clean storm water should enter the drain and that disposing of or allowing runoff to carry silt or household hazardous chemicals into the drains is prohibited. A Homeowner's Association should be formed to educate residents	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	about the sensitivity of the creek and to encourage minimizing the use of pollutants. The project should be designed to provide outdoor roofed carports that drain to the sanitary sewer rather than to the storm drain system. These carports should be equipped with hoses and labeled as the only place on site where cars are to be washed if soap or other chemicals are to be used.	
<u>3.5-D.</u> The Federal Clean Water Act (Section 402(p)) requires discharges of storm water associated with industrial activity and with construction activity on five acres or more to be regulated by the National Pollutant Discharge Elimination System (NPDES) permits.	The project applicant will be required to obtain a construction storm water permit under the National Pollutant Discharge Elimination System (NPDES) permitting program. The Regional Water Quality Control Board (Region 2) will make the determination as to whether a general permit or individual permit will be required.	LS
<u>3.5-E.</u> The project design currently requires the alteration of the natural drainage patterns of the site. This may be considered inconsistent with the City of Oakland General Plan policy that "to the maximum extent feasible, new urban development should be designed to incorporate the natural drainage patterns."	Project inconsistency with the General Plan policy that "to the maximum extent feasible, new urban development should be designed to incorporate the natural drainage pattern" cannot be mitigated without site plan modification.	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.6 ECOLOGY/BIOLOGY</u>		
<u>3.6-A. Vegetation</u>		
The density of the proposed development and the steepness of the slope will require substantial grading and subsequent removal of a significant amount of vegetation, including a native stand of dense oak woodland, which is given high priority for preservation by the City of Oakland. The vegetation clearing, grading, and building on the proposed homesites will result in the removal of native bay laurel, and coast live oak trees, a significant adverse biological impact.	In order to avoid significant biological impacts, the site plan would have to be substantially altered so that it could be considered a "careful inroad for development," as dictated by the General Plan. One way this could be achieved is by limiting development to the non-native eucalyptus woodland proximate to Redwood Road, and incorporating large open space zones in the development and minimizing removal of important native trees, particularly along the northern swale of the property. Future building construction or site landscaping should be required to be planned to avoid removing mature native trees and other native vegetation when possible.	SU
<u>3.6-B.</u> Future residents of the project site may introduce exotic plant species which could displace native vegetation and alter the microclimate inherent to the oak woodland community. Because the present stands of oak woodland are highly valued	Vegetation removed as a result of project activities and previous grading activities should be replaced with native or naturalized species that are of value to local wildlife, and native vegetation should be retained wherever possible.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
by the City of Oakland for scenic, cultural, and biological reasons, introduction of new plant communities, possibly through vegetation removal and subsequent introduction of exotic species by future residents, would be considered a significant adverse impact.	Native plants are generally more valuable as wildlife food sources and require less irrigation, fertilizers, pesticides, and herbicides than introduced species. A landscaping plan should be submitted to the city and the East Bay Regional Park District for approval. This plan should provide for the revegetation of any exposed construction areas using native, drought tolerant species which require a minimum of herbicides, pesticides, and fertilizers to maintain. Individual lots should also be required to be landscaped with native species. The Homeowner's Association should be responsible for the maintenance of landscaping in areas not part of individual lots, and should be required to take steps to ensure introduced exotic vegetation is restricted to individual lots or invade surrounding wildlands.	LS
The vegetation that would be preserved in the development could be indirectly damaged by construction activities. Grading and construction activities can have detrimental effects on vegetation by	The machinery, earthen, or stockpiled materials produced or used during the construction of water systems, storm drainage, buildings, and roadways should be kept away from the driplines of trees, vegetated areas, and	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
directly destroying roots, compacting soils, causing excavated material to accumulate within the dripline of trees, and producing dust which settles on leaves and needles of adjacent trees, shrubs, and other vegetation.	drainage areas.	
<u>3.6-C. Wildlife.</u> At the proposed density of development, the removal of trees for the establishment of building sites on the project site will modify wildlife habitat significantly. The intensive human activity required to bring the proposed project to completion will probably cause displacement of more reclusive wildlife species from wooded areas near the project site. In this way, local species diversity and numbers within species would be altered by project activity, and these biological impacts would be considered significant and adverse.	Construction activities should be as limited in areal extent as is feasible to minimize wildlife habitat disturbance. Temporary fences should be erected between construction sites and designated open space natural areas to protect the vegetation from being trampled by human traffic and equipment access and storage. All trees to be preserved should be fenced at their driplines or at a distance determined by the tree reviewer as indicated in the Oakland Tree Preservation Ordinance.	SU
Riparian biology associated with the west branch of Redwood Creek could be adversely affected by construction activities if proper precautions are not taken during grading and building operations. Removal of	Mitigation measures regarding preservation of water quality, decreasing runoff and reducing erosion listed in Section 3.5, "Hydrology," shall be implemented.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
vegetation during grading leads to greater topsoil erosion rates, which if unchecked could result in siltation of the local drainages during the rainy season.		
The intermittent creek in the northern part of the site will have to be altered due to the project, which would constitute a significant adverse impact to local vegetation and wildlife. The one-way roadway planned for the development is planned just north of the streambed, which would require removal of many native oak and bay trees. Alternation of this drainage swale would result in removal of valuable woodland vegetation, reducing habitat value and eliminating a local migratory corridor for wildlife. Permits will be required for all trees covered by the provisions of the City of Oakland Tree Ordinance. An island of habitat would be created between the project, the Balmoral development, and Skyline Ranch to the south, isolated from habitat in Redwood Canyon by the project. This area would be considered poor habitat due to its isolation.	This impact can only be mitigated to a less than significant level by revisions to the proposed site design. Native trees along the drainage swale, particularly oaks, should have high priority for preservation. Coast live oaks are an important part of the visual landscape in Oakland, provide high quality habitat for wildlife, and have low recruitment from samplings. If oaks need to be removed, three oaks should be planted for every one removed to ensure that the native habitat endures into the 21st century. The saplings should be surrounded by temporary mesh fences to prevent damage from grazing by deer. If possible, replacement trees should be planted in designated open space areas. These measures are only partial mitigation for the loss of mature trees and an intact habitat. The intermittent creek in the northern part of the property and its associated vegetation should	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	be considered for designation as open space, as it is biologically valuable and is connected to the open space network of Redwood Regional Park. In this way, the project would preserve the most valuable biological resource on the site and not create an island of habitat.	
<u>3.6-D. Sensitive Species.</u> The project will have significant short-term and long-term impacts on the native population of steelhead rainbow trout that use the west branch of Redwood Creek for spawning habitat. In the short-term, the construction of the project will lead to siltation of the creek, and the smothering of sensitive spawning gravels with mud. Increased surface runoff from the site attributable to the project will drain directly into the creek and will include urban pollutants such as oil, grease, soap suds, antifreeze, rubber particulates, fertilizers, herbicides, and pesticides, which will adversely affect water quality in the creek.	Grading and construction activities should be prohibited on the site between October and April. An erosion control plan should be designed pursuant to the guidelines of the Association of Bay Area Governments. This erosion control plan should be subject to the approval of the East Bay Regional Park District's Fisheries Department in addition to the City of Oakland Public Works Department. All mitigation measures in Section 3.5, Hydrology," regarding preservation of water quality and reducing erosion should be implemented. To reduce the buildup of numerous contaminants on paved surfaces, a program of regularly sweeping driveways and streets should be	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
Catastrophic incidents affecting the creek's biology will increase due to the development in the largely undeveloped watershed.	considered for watershed protection. While mitigation measures suggested above can reduce water quality impacts to Redwood Creek from activities on the project site, they cannot reduce the impact of potential catastrophic events associated with more intense human activity in the creek vicinity (these events could include, for example, increased car accidents, dumping in the creek, or other such events). These catastrophic events are expected to cumulatively have a significant adverse impact on the water quality of Redwood Creek and therefore could impact the spawning trout population. This would be a significant unavoidable impact of implementation of the proposed project.	SU
<u>3.7 AIR QUALITY</u>		
<u>3.7-A. Construction.</u> Earthmoving, hauling, and other construction activities would result in localized and temporary increases in the levels of PM ₁₀ .	During clearing, grading, earth-moving, or excavation the contractor shall, using water trucks or sprinkler systems, wet down all disturbed areas sufficiently to prevent dust from leaving the site. An effective program of watering of disturbed areas reduces dust by up to 50 percent (U.S. EPA, 1985).	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	After clearing, grading, earth-moving, or excavation is completed the contractor shall seed and water disturbed areas until grass cover is grown. The contractor shall wet the disturbed area down repeatedly and sufficiently to form and maintain a crust on the surface to prevent windblown dust. Windblown particulates may be reduced by up to 80 percent by wetting of this type (EPA, 1985). All areas that are to be paved shall be paved as soon as possible by the contractor. During construction the contractor shall water the disturbed area sufficiently to prevent dust raised from leaving the site. At a minimum, this will include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency will be required whenever the wind speed exceeds 10 mph, or when visible dust emissions are noticeable at the construction site. The contractor shall pave all roadways, driveways, sidewalks, etc., as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.7-B. Regional Air Quality Impacts.</u> Traffic attributable to the project would not generate significant emission levels; however, the project would contribute to cumulative air quality impacts on a regional level which are significant.	To address the project's contribution to regionally significant cumulative impacts, AC Transit should consider extending the route of the bus line that currently travels on Redwood Road to Merrit College. The route should be extended to the intersection of Redwood Road and Skyline Boulevard. The project applicant should be required to pay a fair portion of the costs of this route extension. This would afford project residents with public transportation opportunities which will result in an incremental reduction in vehicle trips from the project.	LS
<u>3.8 PUBLIC SERVICES</u>		
<u>3.8-A.</u> The proposed project would increase the demand for fire protection services. Improper project design would create significant problems for the Oakland Fire Department; therefore, proper protection measures are required by the fire department. The proposed project site is located in a critical fire area as designated by the City of Oakland General Plan, Environmental Hazards Element, due to its vegetation characteristics and its location	A Class "A" roof is required because the project site is in a critical fire area. Some examples of Class A rated roofs are clay tiles, concrete tiles, fiberglass shingles, metal tiles, and perlite shakes. Oakland Level 2 (Oakland Special Residential Sprinkler System) should be required in all residences because the project site is in a critical fire area. If sprinklers are not required,	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
on the urban/wildland interface and will therefore be subject to more stringent fire protection standards.	structures three or more stories high are required to contain a secondary exit from the structure that leads to the street. Fuels management requires that all vegetation within 30 feet from structures be clear. No limbs or overhanging branches shall be near any structures. Interconnected smoke detectors will be required for this project. Stucco exterior or one-hour rating construction on exterior walls of residences is recommended to minimize fire hazard. Every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel shall be provided and maintained at all times with a screen over the outlet. Such screens shall be constructed of nonflammable material with openings of not more than one-half inch in size. Addresses should be posted so they are easily read from the street. It should be required that project landscaping consist of predominantly native, drought	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.8-B.</u> As currently designed, the 16-foot wide proposed project's roadway does not meet the requirements of the Oakland Municipal Code and would not provide adequate project access for emergency equipment.	tolerant, and fire resistive plants. Building code requirements are currently changing in the City of Oakland due to the fire storm of October 1991. The proposed development will be subject to all building codes and additionally recommended fire protection devices necessary as determined by the City of Oakland Fire Department.	LS
<u>3.8-C.</u> In order to preserve remaining solid waste disposal capacity and meet AB 939 requirements, efforts should be made to minimize the amount of solid waste going to landfills. Direct impacts of the project are less than significant; however, the project will contribute to cumulative impacts on a regional level.	A curbside recycling program or an on-site recycling center should be incorporated into the project. This could be maintained by the homeowner's association or by provisions implemented by the applicant. Information shall be provided by the homeowner's association to homeowners about the recycling services in the development area.	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
3.8-D. The amount of sewage that would be generated as a result of the proposed project will not significantly impact wastewater services during dry weather, but may contribute to a cumulative impact on wastewater services during wet weather.	Buy back centers and possible markets for recyclables in the area should be identified, in addition to the project recycling program. Homeowners should be encouraged to recycle glass, metal, cardboard, and other materials to the maximum extent feasible. Insulation and other products made of recycled materials should be encouraged for use in the construction of development structures.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	The applicant should develop plans for the long term maintenance of the project storm drains. These plans should be approved by the city. The applicant should develop plans for the long-term maintenance of the proposed pump station and pressure lines. The City Public Works Department has indicated that part of the public sewer which will serve this project is located outside the City of Oakland limits. Legal agreements and easements from appropriate agencies will be required and should be obtained by the project applicant.	LS
<u>3.8-E.</u> The increase in water demand resulting from the proposed project may contribute to a regionally cumulative impact on water supply.	Water conservation devices such as low flow shower heads and toilets should be incorporated into the design of the proposed residential development in order to mitigate the project's share of regional cumulative significant impact. Landscaped areas should consist of native and drought tolerant vegetation which require less water. The homeowner's association should ensure adequate ongoing maintenance of landscaped areas.	LS
--		
(SU) = Significant unavoidable impacts if project is implemented as proposed		
(LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.8-F.</u> Adequate capacity is available within the Oakland Unified School District to accommodate students generated from the proposed development and generated by developments in the cumulative scenario. However, the proposed project may result in cumulative impacts on schools when combined with similar developments being proposed throughout the City of Oakland.	The Oakland Unified School District currently collects a developer's fee of \$1.85 per square foot of residential development which would mitigate project impacts that are less than significant on a project basis, but contribute to citywide significant impacts.	LS
<u>3.9 NOISE</u>		
<u>3.9-A. Construction Noise.</u> Substantial noise for a temporary period will be generated by construction activity and construction vehicles.	All construction vehicles and equipment should be properly muffled. California State Noise Standards for Delivery Motor Vehicles should be met. Construction operations and related travel in the vicinity of the project site to and from the construction area should be limited to the hours of 7:30 A.M. through 6:00 P.M., Monday through Saturday. The public should be informed of proposed construction time lines to minimize potential annoyance related to construction noise. This is important for residences located within a few hundred feet of construction activity.	LS
(SU) = Significant unavoidable impacts if project is implemented as proposed		
(LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
<u>3.9-B.</u> Sound levels due to the project traffic will increase from 62 Ldn to 63 Ldn for proposed project residences within 70 feet of the Redwood Road centerline. The sound levels due to cumulative traffic conditions will increase from 62 to 64 Ldn for project residences within 70 feet of the Redwood Road centerline. Residences greater than 70 feet from the centerline of Redwood Road would experience an Ldn below 60 for both the exterior and interior as a result of distance from the road and shielding by other homes.	Mechanical ventilation should be provided for homes within 70 feet of the center line of Redwood Road. This would permit residents to maintain operable windows in a closed condition and reduce interior noise levels. Exterior doors should be 1.75-inch solid core doors with perimeter seals. All frames and seals should be thoroughly caulked and weatherstripped to prevent air leaks. All roof/wall and floor/wall junctions should be thoroughly sealed and caulked. Solid fencing eight feet high above the finished grade installed along the property line contiguous with Redwood Road would shield those rear yards adjacent to Redwood Road and mitigate the significant noise impacts. Fencing along Redwood Road would introduce a visual impact along what is currently a scenic park-like corridor. Alternatively, residences can be designed with shielded patios to mitigate for noise impacts in portions of rear yards which would be contrary to the applicants objective of	SU
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

TABLE 2.1-1. SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANT IMPACTS	MITIGATION MEASURES	EXPECTED SIGNIFICANCE AFTER MITIGATION
	maximizing scenic opportunities to residents. Modification of the site plan to include a 70-foot buffer between the Redwood Road centerline and yards would be an alternative mitigation measure for noise impacts in rear yards.	
(SU) = Significant unavoidable impacts if project is implemented as proposed (LS) = Less than significant impacts		

(CONTINUED)

3. EXISTING SETTING, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

3.1 LAND USE AND PLANNING

EXISTING SETTING

Existing Land Use. The project site consists of approximately 5.8 acres of land located east of Highway 13 adjacent to Redwood Road, on a steep slope immediately below the ridge crest of the Oakland Hills (see Figure 3.1-1). The undeveloped project site currently consists of open space which supports a variety of habitats including grassland, scrub, and woodland (see Section 3.6, "Ecology/Biology," for full discussion of biological resources on the project site). The site is also located within a mostly undeveloped watershed of Redwood Creek which flows into the upper San Leandro Reservoir near the East Bay Municipal Utilities District (EBMUD) intake tower for drinking water prior to the filter plant. The reservoir provides drinking water to Oakland and other East Bay communities.

Surrounding Land Uses. The project site has a variety of surrounding land uses. A summary of these land uses is as follows (see Figure 3.1-1):

- To the northeast and the east, the site is bound by a steep bluff, on top of which there is a residential development.
- To the south, the site is bound by a horse ranch which formerly provided recreational opportunities associated with the regional open space surrounding the site. The horse ranch is no longer in operation.
- To the west, the site is bound by Redwood Road; beyond Redwood Road are the open space land uses of Redwood Regional Park. Redwood Regional Park provides recreational, educational, and scientific opportunities in addition to wildlife habitat (see Figure 3.1-2).
- To the north, the site is bound by Redwood Regional Park.
- The Redwood Creek riparian corridor is across Redwood Road from the project's western boundary. Redwood Creek flows along Redwood Road for the length of the project site and then crosses under the road and flows adjacent to the northwest corner of the site.

The City of Oakland General Plan. The City of Oakland Comprehensive Plan (1980) constitutes the City of Oakland's General Plan. One major component of the Oakland Comprehensive Plan is the Policy Plan. This is the city's comprehensive statement of basic goals and policies which serves as an overview and summary of policies contained in other components of the Comprehensive Plan, such as the individual elements e.g., the Circulation Element; the Land Use Element; and the Open Space, Natural Resources, and Recreation Element. The Policy Plan addresses the areas of Human Resources, Housing, Jobs and Employment, Land Use, Parks and Recreation, Open Space and Natural Resources, Safety and Seismic Safety, Circulation, Scenic Highways, and Noise. This section of the EIR is concerned with essentially two policy areas and the corresponding General Plan Elements: Land Use, and Open Space and Natural Resources. Other sections of this EIR will address other elements of the General Plan.

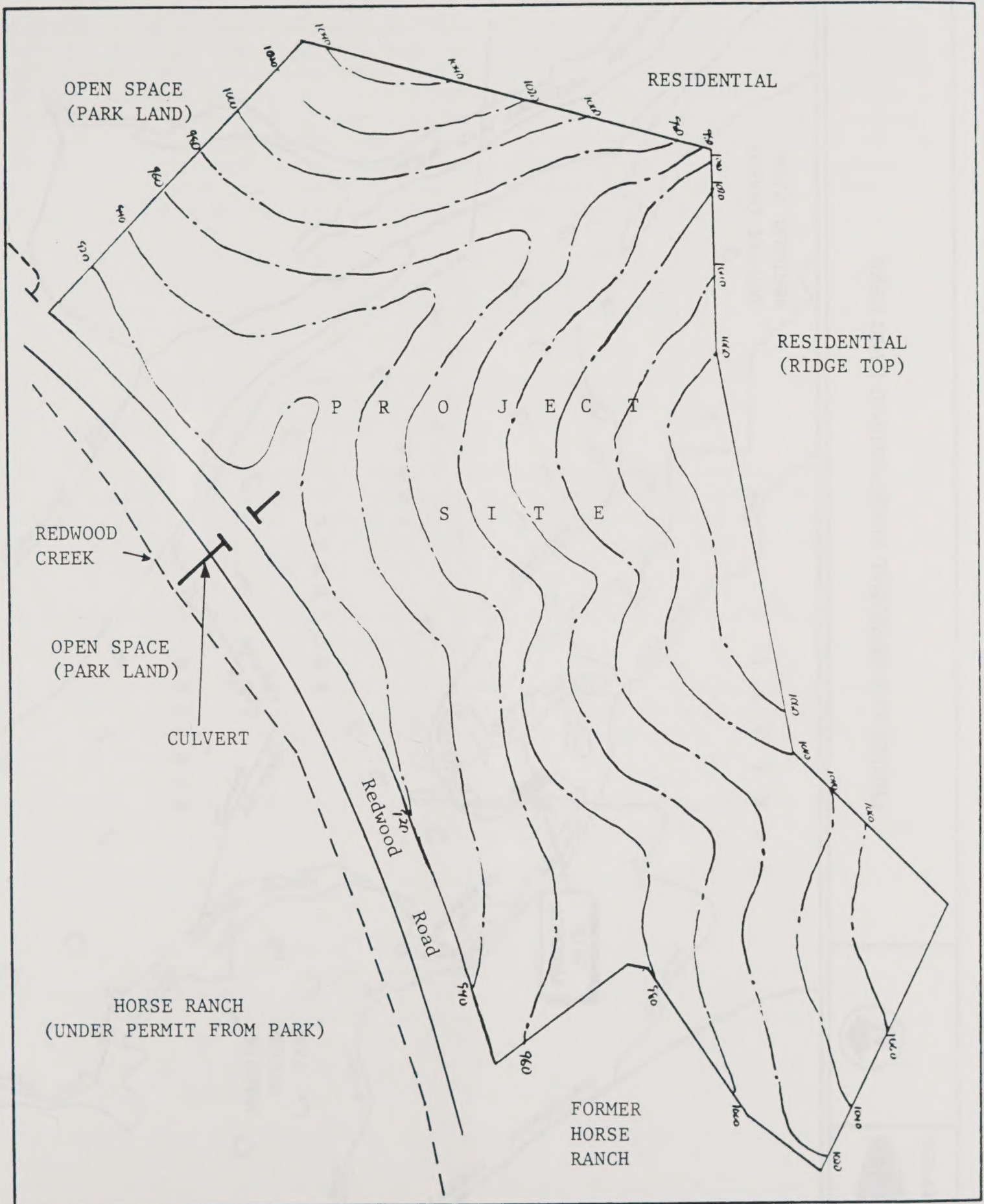
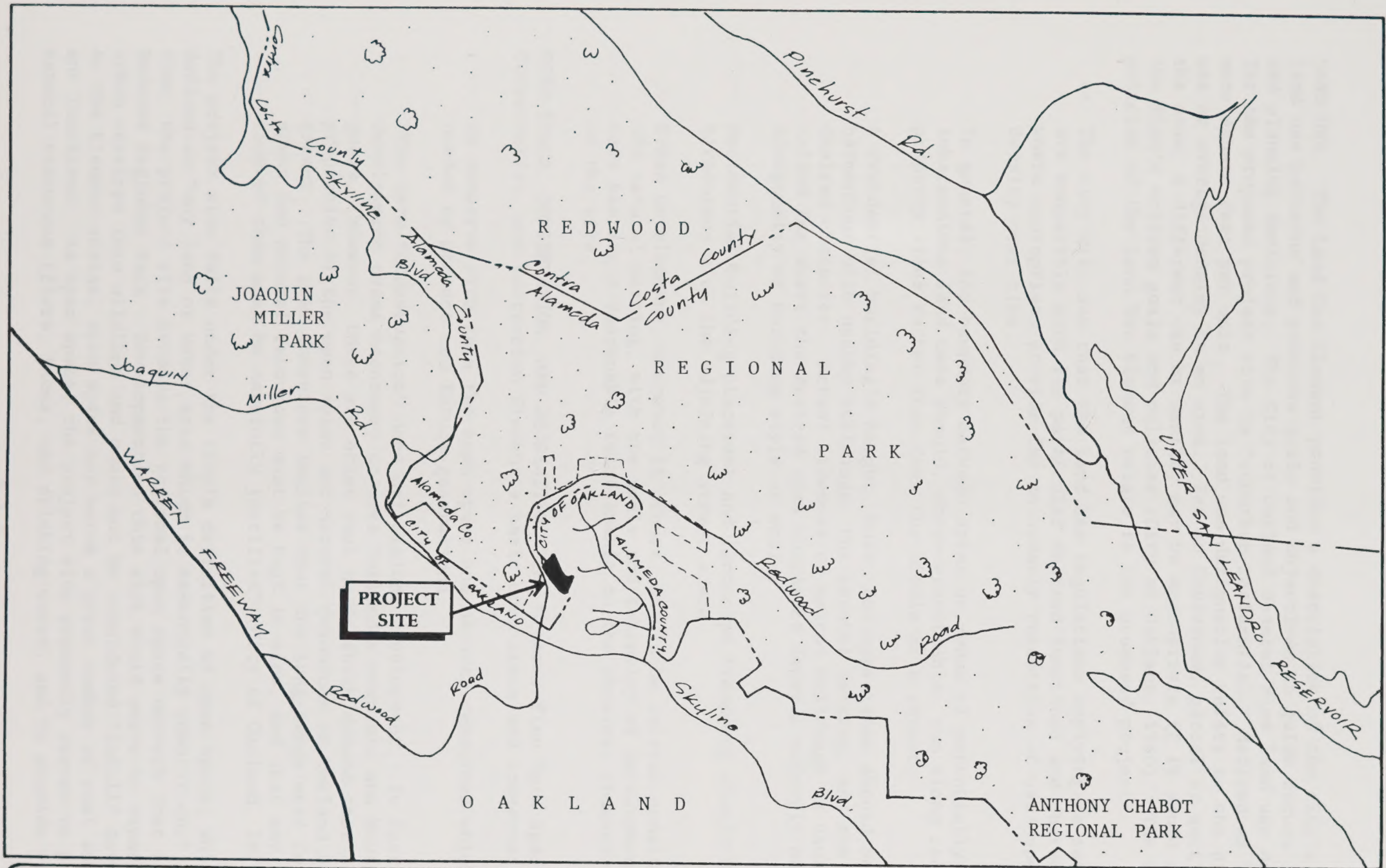


FIGURE 3.1-1 LOCAL SURROUNDING LAND USES



LAND USE. The Land Use Element provides a description of the city's existing land use patterns and provides goals and objectives to guide future land use and planning decisions. The City of Oakland General Plan land use designation for the proposed project site is "suburban residential," defined as 10,000 or more square feet per unit. The land use designation refers to the predominant use or average density in an area. For an individual parcel or section within the area, a different use or density may be appropriate if it would conform to the Plan's written goals and policies (City of Oakland, 1980). The following policies of the Land Use Element relate to the proposed project:

- The city will see that the land use regulations applying to each area are compatible with its particular desired functions and character, and where appropriate provide for an orderly transition of use type or density over time.
- In general, the boundary between areas or zones of potentially inharmonious land uses should, where practicable, run along rear property lines rather than down the middle of a street.
- A residential building's height, bulk, and appearance should be harmonious with nearby buildings, the natural setting, and the area's desired character. Actual likeness to nearby buildings is usually called for where the desired area character depends strongly on homogeneity of building style or scale.
- Residential building placement and landscape treatment should be harmonious with the adjoining street scene.
- Urban development, wherever it occurs, should be related sensitively to the natural setting, with the scale and intensity of development in each case bearing a reasonable relationship to the physical characteristics of the site.

OPEN SPACE, CONSERVATION, AND RECREATION. The General Plan Open Space, Conservation, and Recreation Element's basic open space and conservation goal is:

- To conserve with care the open space and natural resources which will be needed by present and future generations.

"The term "conservation" does not exclude development. In fact future development seems necessary to meet Oakland's economic and housing goals. However, there are other real needs which demand that a high proportion of the open space and natural resources in Oakland be kept intact. The goal therefore implies that the long-range need for open space and natural resources must be kept in mind, and that any consumption of them must be carefully justified" (City of Oakland, 1976).

The project site falls under the city's definition of open space, which is defined as "any land or water area which is essentially unbuilt on." In addition, the project site borders the regional open space network that includes Redwood Regional Park. Development on this site would serve to expand the urban envelope into wildland and could not be considered "infill" development. As the Element states, open space may serve a great number of real and important functions. As open space, the project site presently serves to preserve natural resources (flora, fauna, and drinking water) and to provide visual

contrast to the urbanized landscape of the city. The site is adjacent to Redwood Road which provides a scenic entryway to the park system. The General Plan for the city contains the following policies which relate to the conservation of visual resources and are directly relevant to the proposed project:

- Urban development wherever it occurs should be related sensitively to the natural setting, with the scale and intensity of development in each case bearing a reasonable relationship to the physical characteristics of the site.
- In all development and construction in the Hills (those areas located generally along and northeast of Mountain Boulevard) special efforts should be made to conserve open space and natural resources. Every development which occurs here on a site of substantial size should reserve the most appropriate portions as permanent open space, and these should generally add up to a significant proportion of the site.

Zoning Ordinance. The proposed project site is presently zoned R-30, one-family residential, under the City of Oakland Zoning Ordinance. This designation is "intended to create, preserve, and enhance areas for single-family dwellings in desirable settings for urban living, and is typically appropriate to already developed lower density dwelling areas of the city." The proposed project will be required to comply with building heights, yard sizes, and buffering requirements of the R-30 zoning code. In general, building heights on an upslope lot cannot exceed 35, and building heights on a downslope lot cannot exceed 40 feet according to R-30 zoning requirements.

The proposed project will also be required to comply with the Planned Unit Development Regulations of the Zoning Ordinance.

Oakland Municipal Code for Hillside Subdivisions. The proposed project will be required to comply with the Oakland Municipal Code for hillside subdivisions. Hillside subdivision provisions apply where street extensions or new street patterns are to be built on previously unsubdivided land. The term "hillside subdivision" is defined as land that is proposed to be subdivided which has an average difference in elevation of more than 15 feet in a horizontal distance of 100 feet (Oakland Municipal Code, Chapter 7, Article 4, Section 7-4.50).

In hillside subdivisions where lots front on both sides of a street and lot area is less than one acre, each lot is required to have an area of not less than 8,000 square feet with an average frontage of not less than 80 feet. The minimum width of the lots shall not be less than 60 feet at the front building line. A five foot paved sidewalk on both sides of the street is also required (Oakland Municipal Code, Chapter 7, Article 4, Section 7-4.54).

Prevailing Lot Size Regulations

The Real Estate Subdivision Regulations (Article 4 of the Oakland Municipal Code) requires that all new lots that are created be at least as large as the prevailing lot size of surrounding development. This requires that the minimum lot size for any new development be the median size of all lots within 200 feet of project boundaries (excluding land held as acreage). The median lot size for the seventeen lots within 200 feet of site boundaries is 22,216 square feet. Thus, project lots will be required to be equal to or greater than 22,216 square feet in size (Section 7-4.31.6 of the Oakland Municipal Code).

IMPACTS

Standard of Significance. The adverse land use impacts of a project will normally be significant if the project will conflict with adopted environmental plans and goals of the community where it is located; conflict with established recreational, educational, religious, or scientific uses of the area; or convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land. The City of Oakland General Plan and the City of Oakland zoning ordinance officially express the community's land use goals in evaluating the potential impacts of this proposed development.

This section will also consider the applicant's proposal in relation to surrounding land uses, and will review internal relationships of plan components. This discussion draws upon and refers to other sections of the EIR as necessary to present an integrated picture of project impacts. Other subsections will need to be consulted for full discussions of all impacts and mitigation measures.

3.1-A. Project and Surrounding Land Uses. The proposed project would alter the current use of the site from open space to the subdivision of 23 residential lots and the eventual construction of single-family residences and an access road to serve the development. The proposed project would introduce high density development into an otherwise relatively undeveloped park-like canyon and permanently remove the site from being a potential addition to the regional park system.

3.1-B. Surrounding Land Uses. The proposed project would create visual impacts to park visitors from view corridors in Redwood Regional Park. Views to motorists along Redwood Road, a "gateway" to the regional parks, would be altered from the current rural park like corridor. These impacts are discussed fully in Section 3.2, "Visual/Aesthetics" and could only be mitigated with alterations to the site plan, including reduction in density of proposed residences and avoidance of sensitive view corridors.

3.1-C. The proposed project, because of construction and the intensification in land use, would be incompatible with Redwood Creek. Erosion of the project site, both during construction and in the long-term, could cause sedimentation in the creek, adversely affecting its water quality and the sensitive steelhead trout which spawns in the creek. The water quality of Redwood Creek could also be adversely affected by increased urban pollutants in storm water runoff from the site that would accumulate in Redwood Creek. Increases in pollutant levels could also adversely impact the steelhead rainbow trout that spawn in the creek. See Section 3.5, "Hydrology" and Section 3.6, "Ecology/Biology" for a full discussion of these impacts.

3.1-D. Proposed residential development will generate additional automobile traffic in the project area. While the additional traffic generated is not considered a significant impact, project ingress and egress as currently designed cannot be accommodated safely by the current roadway geometry of Redwood Road near the project site. The mitigation measure for the impact of the inadequate sight distance for southbound traffic traveling on Redwood Road is the widening of a portion of Redwood Road in the vicinity of the project

site. It is recommended that the project applicant in consultation with the City of Oakland traffic engineer and the County of Alameda traffic engineer explore the feasibility of widening the east side (project side) of Redwood Road to accommodate a left turn pocket or relocating project access roads to locations with better sight distance. If this is not feasible and it is determined that the west side of Redwood Road will need to be widened there could be significant impacts to biological resources of Redwood Creek.

On site mitigation, relocation of access and egress to the site, is the only means of mitigation that will avoid impacts to Redwood Road. The project proponent should try to relocate on site access roads in order to increase sight distance to City Standards.

Residences neighboring the project site on the ridge top will experience temporary short-term increased levels of noise during the construction phase, as well as temporary increased dust levels. These impacts are temporary and mitigation measures outlined in Sections 3.7, "Air Quality" and 3.9, "Noise" are expected to reduce these impacts to below a level of significance.

Residential uses to the east of the site will also experience long-term noise and visual impacts associated with the change in land use from open space to residential. Noise impacts are not expected to be significant. Visual impacts would be significant for those residences overlooking the project site.

3.1-E. Consistency with City of Oakland General Plan Policies

LAND USE. Some of the proposed lot sizes are inconsistent with the guidelines outlined in the City of Oakland General Plan which requires 10,000 or more square feet per unit for the "Suburban Residential" land use designation.

The land use element of the General Plan expresses the policy that a residential building's height, bulk, and appearance should be harmonious with nearby buildings, the natural setting, and the area's desired character. The proposed project's residential units are not considered to be on a harmonious scale with nearby residences. Project residences appear taller, bulkier, and denser than existing visible residential development.

The land use element also requires development to be related sensitively to the natural setting with the scale and intensity of development in each case bearing a reasonable relationship to the physical characteristics of the site. Due to the steepness of the project site, buildings are "stepped up" on the slope. While this reduces grading requirements, it has the effect of adding to their height and visibility; retaining walls add to the bulk. The proposed residences are not considered consistent with the General Plan in this regard.

OPEN SPACE AND NATURAL RESOURCES. The proposed project site is located in an area of Oakland which is recognized as being of prime importance with regard to regional open space and natural resources. The site abuts undeveloped parkland and recreation facilities on three sides.

The General Plan specifies that urban development wherever it occurs should be relocated sensitively to the natural setting, with the scale and intensity of

development bearing a reasonable relationship to the physical characteristics of the site. The proposed project's scale and intensity is not considered to be consistent with the General Plan policy considering the site's topography and the surrounding natural setting of open space parkland.

The General Plan specifies that every development occurring in the hills on a site of substantial size should reserve the most appropriate portions as permanent open space and these should generally add up to a significant proportion of the site. While the definition of a "site of a substantial size" is a policy decision of the City of Oakland, the site plan (see Figure 1.2-1) indicates that there are no designated open space areas on-site; all portions of the project site would fall within designated lots. As discussed in Section 3.6, "Biology/Ecology," the most appropriate portion for designation as open space from a biological viewpoint would be the northern drainage swale with its significant native vegetation and its natural connection to the adjacent park system.

3.1-F. Lot Size and Zoning. Lot sizes of the proposed project vary from 5,141 square feet (Lot #18) to 13,860 square feet (Lot #7). Six of the lots (Lots #8, #18, #19, #21, #22, and #23) are smaller than the minimum of 8,000 square feet required for hillside subdivisions according to the Oakland Municipal Code (OMC, Section 7-4.54). All of the proposed lots are smaller than the 22,213 square feet required by the prevailing lot size regulation (OMC, Section 7-4.31.6). Seventeen of the 23 lots are inconsistent with the minimum width requirement of 60 feet at the front building line (OMC, Section 7-4.54). This is a significant impact that can only be mitigated through redesign of the site plan to conform to city requirements.

Seven residences (Lots #12, #17, #18, #19, #21, #22, and #23) exceed the building height of the R-30 zoning limitations when measured to the highest point of the building. This is a significant impact that can be mitigated through redesign of those buildings that exceed the height limits.

MITIGATION MEASURES

The following mitigation measures related to land use impacts will reduce significant or potentially significant impacts to less-than-significant levels, unless otherwise indicated:

Project Land Use

3.1-A The land use impact from alteration of the current use of the site from open space adjacent to the regional open space network to a subdivision of 23 residential lots and eventual construction of 23 residential units cannot be mitigated below a level of significance.

Surrounding Land Use

3.1-B The visual impacts of the proposed project, as viewed from public view corridors such as Redwood Regional Park and Redwood Road, cannot be mitigated below a level of significance, unless there are modifications in the site plan including reduction in density of the proposed residences. The project should be redesigned to avoid visually sensitive areas along Redwood Road as well as visually sensitive view

corridors from Redwood Park. A balance will need to be achieved since locating homes further back from Redwood Road (and thus preserving the parklike corridor along Redwood Road) makes them more visible from distant view corridors such as hiking and equestrian trails in Redwood Regional Park. The project redesign should also avoid development in the intermittent stream, a significant visual (as well as biological) feature of the site.

- 3.1-C The impact of the proposed project on water quality and sensitive species in Redwood Creek can be reduced with careful construction practices and other hydrological mitigation measures. See Section 3.5, "Hydrology/ Drainage/Water Quality".
- 3.1-D In order to ensure the safety of southbound traffic on Redwood Road in the project area, the widening of Redwood Road in the project area to create a left turn pocket and/or the redesign of the project roadway entrance point will be necessary. It is recommended that the project applicant in consultation with the City of Oakland traffic engineer and the County of Alameda traffic engineer explore the feasibility of widening the east side (project side) of Redwood Road only. If it is determined to be infeasible to widen only the east side of Redwood Road and the west side of Redwood Road will need to be widened, there would be significant impacts to the biological resources of Redwood Creek. Relocation of project access and egress drives should be considered. The project applicant should seek to relocate drives in order to meet sight distance requirements of the City of Oakland. On-site redesign is the only means of mitigation that will avoid further impact to the Redwood Road Corridor.

Consistency with City of Oakland General Plan Policies, Zoning Code and Hillside Subdivision Requirements

- 3.1-E Modifications are required to the site plan in order for the proposed development to be consistent with General Plan policies regarding harmony of scale with existing surrounding buildings, scale and intensity of new development relating sensitively to the natural setting, and the requirement of designation of open space areas. This may require a reduction in the number of units planned for the site.
- 3.1-F The project should be redesigned to meet the requirements of the Oakland Municipal Code regulations for new hillside subdivisions regarding lot areas and lot widths. Lots must meet prevailing lot size requirements.

The project should be redesigned to meet the zoning code requirements for building heights.

EXISTING SETTING

The undeveloped project site is located on the steep slopes of Redwood Canyon that rise above Redwood Road, north of the intersection with Skyline Boulevard, just within the city limits of Oakland. The site borders the open space network that includes Redwood Regional Park and Joaquin Miller Park. The site is not visible to most of the surrounding roadways, with the exception of Redwood Road, but is visible to pedestrian and horse trails within Redwood Regional Park. The site offers aesthetic resources typical of Open Space in the East Bay Regional Park System. The undeveloped site presently blends with its surrounding natural visual environment. It is an extension of woodland and forest vegetation that covers the hillsides of the mostly undeveloped Redwood Canyon. Residential development has occurred only at the crest of these hillsides. The steep, wooded slopes of the canyon below have been left in a natural state or have returned to a natural state after acquisition by the East Bay Regional Park District. Plates 1 through 7 of Figure 3.2-1 show views toward the site from areas in the vicinity with visual photosimulations of how the proposed project would affect the visual quality of the project site. Figure 3.2-2 indicates the location and direction of the photographs of Figure 3.2-1.

The topography of the local area strongly influences the visibility of the project site. The crest of Skyline Boulevard hides the site from the majority of the city. However, the site is visually prominent within the canyon itself, providing an attractive wooded backdrop for motorists on Redwood Road and users of Redwood Park (Plates 1 through 4, 5a, and 6a). The site is visually consistent with the mostly undeveloped, wooded canyon to the north (Plate 6a) which currently serves as a parklike gateway to the entrance of Redwood Park and other portions of the regional open space network.

The vegetation on the site enhances its visual quality. The mosaic of thick woodland areas and open grassy zones on the site is prominently visible to motorists on Redwood Road and users of Redwood Park, providing an attractive backdrop of natural open space. Large eucalyptus trees that line Redwood Road at the base of the site create a wooded corridor along Redwood Road (Plates 1 and 2) visible to motorists along Redwood Road.

The visual character of the site is predominantly a wooded, natural landscape with pockets of grassland areas. Oak trees grow in greater densities near drainage areas (Plate 3). Approximately 43 redwood trees grow in the upper reaches of the swale, however only three redwood trees are actually within the site boundaries (Jones, 1992). Tall eucalyptus trees grow in a dense grove along Redwood Road, at the bottom of the canyon (Plates 1 and 2). No structures currently exist on the site. A fire road has been graded on the property, north of the swale in the northern portion of the site, but no impermeable surfaces are in place. The fire road represents the only unnatural visual attribute of the project site, but it is hardly visible from on-site and off-site locations. The site is bordered on the north and west by wooded and grassy hillsides such as those found on the site. To the east, the site is bordered by residential development along the ridgeline, and to the south, the site is bordered by a horse ranch (Plate 6a).



Plate 1:



Plate 2:



Plate 3:

Plate 1: View of site from northbound Redwood Road (Away from Oakland).

Plate 2: View of the site from southbound Redwood Road (Towards Oakland).

Plate 3: View of site from Redwood Road of drainage swale with native oak and redwood trees in northern part of the property. The redwood trees extend beyond the property line and form a large grove just beyond the property line.

FIGURE 3.2-1 PHOTOGRAPHS OF THE PROJECT AREA AND PHOTOSIMULATION OF THE PROPOSED PROJECT



Plate 4a: Existing view of the project site, facing east, from equestrian trails in Redwood Regional Park. The northern boundary of the site is at the far left of the photograph. The wooded ravine of the site is visible at left. Eucalyptus trees along Redwood Road are visible in the center of the plate. The southern boundary of the site is at right, immediately left of the wooded ravine that includes Skyline Ranch. The woods and horse trails in the foreground of the eucalyptus trees are part of Redwood Park.



Plate 4b: Photosimulation of the proposed project.

Source: Unique Concepts

FIGURE 3.2-1 (CONTINUED)



Plate 5a: Existing view facing east, from Oakland Riding Academy, which is on the opposite side of Redwood Canyon from the site. This view includes the homes of the Balmoral development and eucalyptus trees along Redwood Road.

FIGURE 3.2-1 (CONTINUED)

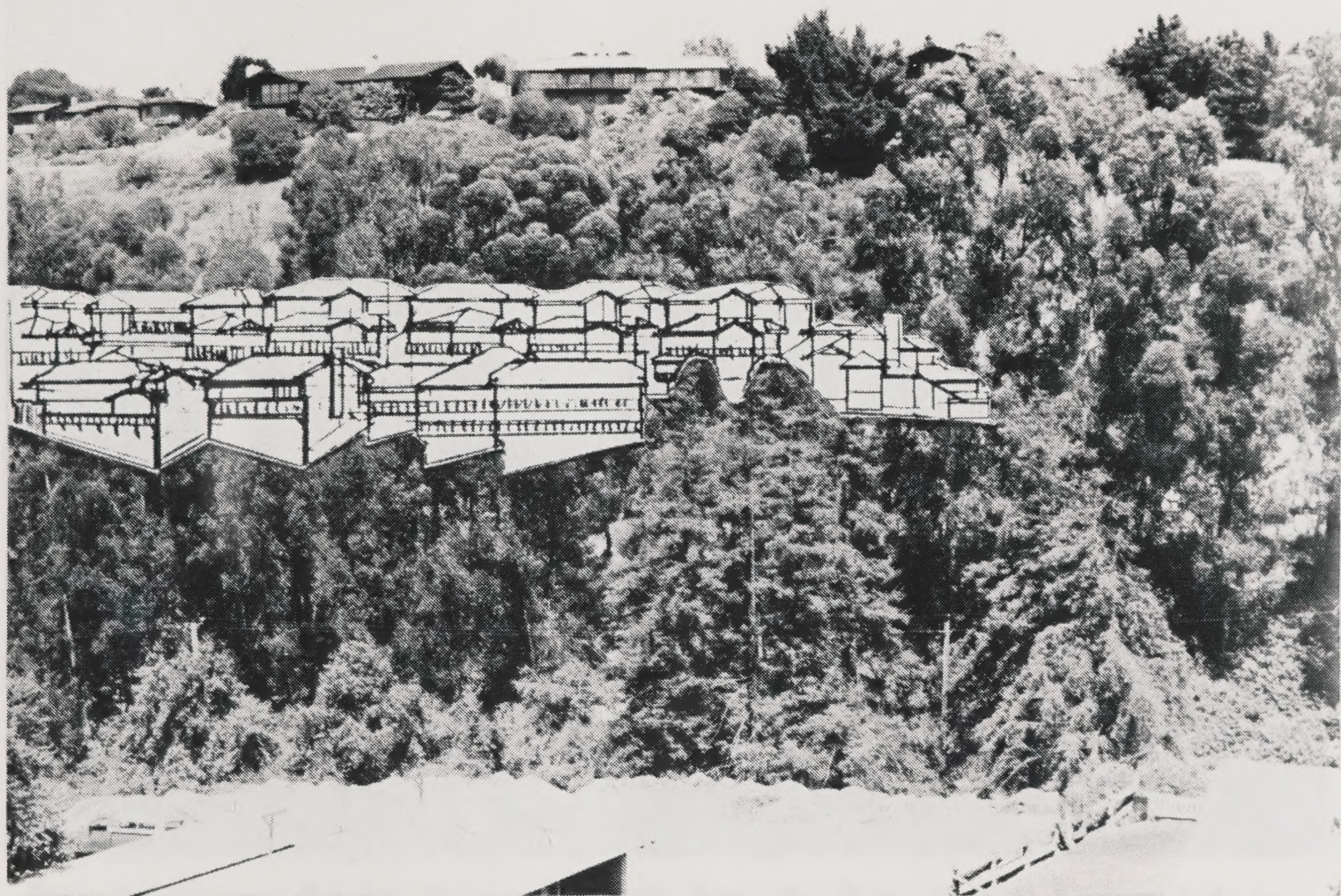


Plate 5b: Photosimulation of the proposed project.

Source: Unique Concepts

FIGURE 3.2-1 (CONTINUED)



Plate 6a: View of the site, facing southeast, from the Dunn Trail in Redwood Park, near Skyline Boulevard. This long distance view shows the visual context of the site that includes the Balmoral neighborhood and Skyline Ranch (large building at center).

FIGURE 3.2-1 (CONTINUED)



Plate 6b: Photosimulation of the proposed project

Source: Unique Concepts

FIGURE 3.2-1 (CONTINUED)



Plate 7a: Existing view of the site, facing north, from neighboring Skyline Ranch, a horse ranch.

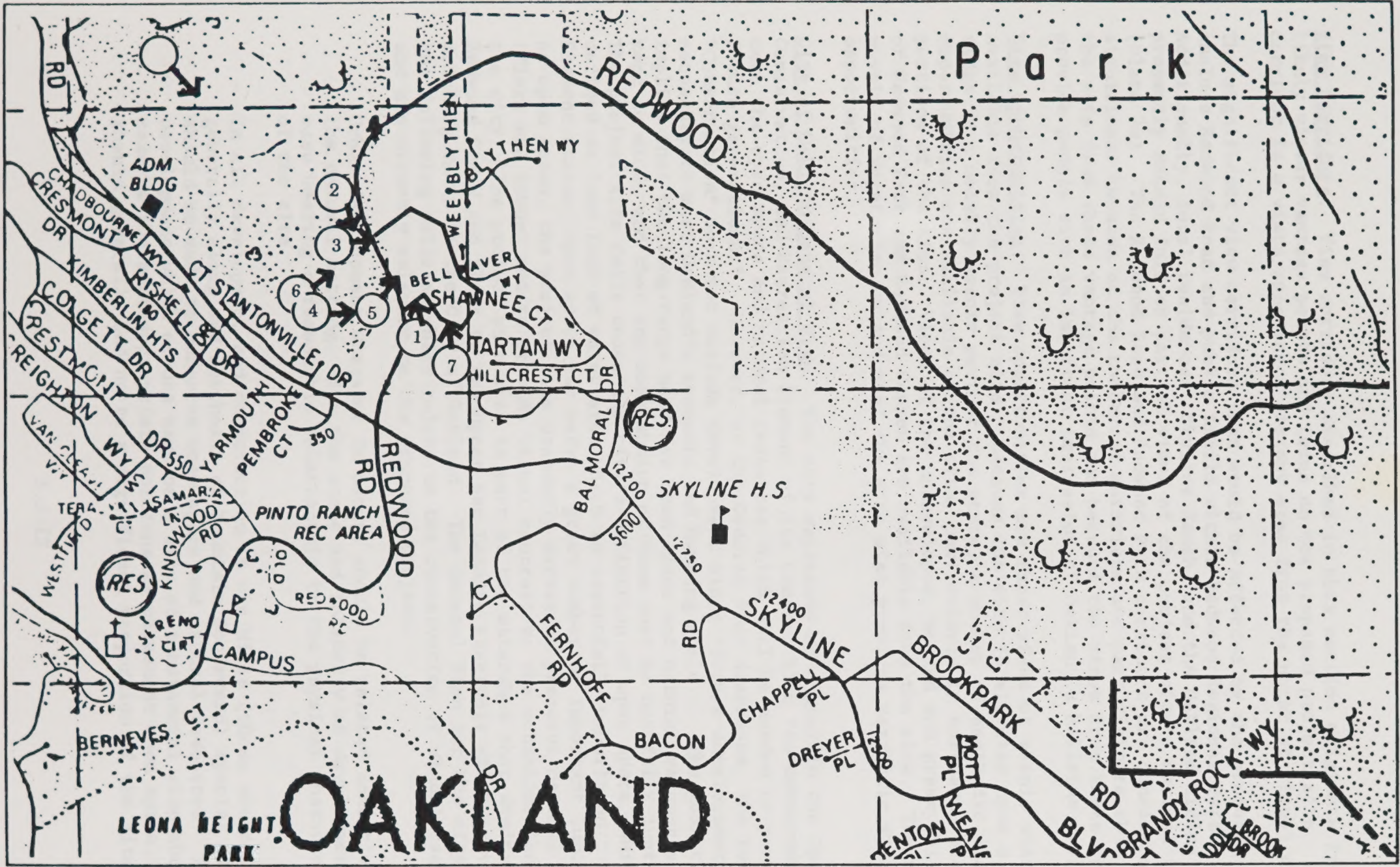
FIGURE 3.2-1 (CONTINUED)



Plate 7b: Photosimulation of the proposed project

Source: Unique Concepts

FIGURE 3.2-1 (CONTINUED)



 earth metrics	 SCALE	FIGURE 3.2-2 LOCATION AND DIRECTION OF PROJECT SITE PHOTOGRAPHS
--	--	--

View Corridors. View corridors described in this section originate from likely viewer vantage points and focus on the proposed project site. A view corridor is a vista spanning a distant area from the point of visual origin.

The significant view corridors that would be affected by the proposed project include Redwood Road and public trails within Redwood Regional Park. Additionally, local residences, Skyline Ranch, and the Oakland Riding Academy presently retain full or partial views of the project site's natural terrain (Plate 7a). The Redwood Road and Redwood Park corridors are considered significant because of the number of motorists and park visitors able to view the site from these vantage points and because the views from these corridors provide people with an important impression of Oakland's hillside environment.

View Opportunities. View opportunities are those views of scenic vistas available from the project site. Because the site is elevated upon a steep ridge in a notably scenic part of the state, a number of aesthetic view opportunities are available on the site, particularly in northern, elevated portions of the site. Views of the undeveloped, wooded and grassy hillsides of Redwood Park and Redwood Canyon are available from the site. The natural mosaic of vegetation on and near the site also provides aesthetic view opportunities.

City of Oakland General Plan. The city expresses as a goal in the Open Space, Conservation, and Recreation Element of its General Plan "to conserve with care the open space and natural resources which will be needed by present and future generations." However, as the General Plan discusses, the term "Conservation" does not exclude development since "future development seems necessary to meet Oakland's economic and housing goals... The goal therefore implies that the long-range need for open space and natural resources must be kept in mind, and that any consumption of them must be carefully justified." The project site falls under the city's definition of open space, which is defined as "any land or water area which is essentially unbuilt on." As the Element states, open space may serve a great number of important functions. As open space, the project site presently serves to preserve natural resources (flora and fauna) and to provide visual contrast to the urbanized landscape of the city. The project site also is part of the watershed that drains into Redwood Creek and flows to the Upper San Leandro Reservoir which provides drinking water to the City of Oakland. The General Plan for the city contains the following policies which relate to the conservation of visual resources and are directly relevant to the proposed project:

- Urban development wherever it occurs should be related sensitively to the natural setting, with the scale and intensity of development in each case bearing a reasonable relationship to the physical characteristics of the site.
- In all development and construction in the Hills (those areas located generally along and northeast of Mountain Boulevard) special efforts should be made to conserve open space and natural resources. Every development which occurs here on a site of substantial size should reserve the most appropriate portions as permanent open space, and these should generally add up to a significant proportion of the site.

IMPACTS

Standard of Significance. A project will normally have significant adverse visual impacts if it would have a substantial, demonstrable negative aesthetic impact. This determination is based on several criteria including observer position, views, view corridors, existing and proposed screening, backdrop, the characteristics of the proposed development, and the existing visual character of the surrounding area.

3.2-A. Visual and Aesthetic Impacts. The proposed project will change the visual character of the hillside that rises above Redwood Road and opposite public lands of Redwood Regional Park. As the visual photosimulation demonstrates, what is presently a wooded slope amid undeveloped hillsides would be transformed into a densely developed residential area (Plates 4b, 5b, and 6b). The development represents an unprecedented intrusion into Redwood Canyon, which would leave only a narrow strip of undeveloped hillsides between the project and the homes of the ridgetop development. The intervention of residences on the project site would change the present natural visual environment of these hills as viewed from important view corridors such as Redwood Road, Redwood Regional Park, and local residences and horse ranches. The aesthetic impacts of the proposed project will be significant and adverse.

3.2-B. Introduction of nighttime lighting to the project site will increase the site's visibility to local residents and motorists. Additionally, daytime glare from automobiles and windows attributable to the development will make the site more visible and potentially annoying to users of the trails in Redwood Regional Park. Hiking trails are particularly sensitive to glare effects because of the nature of their use. Hiking, biking and horseback riding all entail relatively slow progress through an area, prolonging the effect of the glare. Impacts related to light and glare would be significant, as the project site is presently void of these adverse visual properties. Light and glare introduced on the site would reinforce the visual change of the site from natural open space to developed housing. This is a significant adverse visual impact to the view corridors in the park and would be noticeable to hikers in Redwood Park.

3.2-C. Since the site is completely undeveloped, certain infrastructure extensions will be required for the development to occur. The introduction of aboveground utility or telephone lines on the hillsides noticeable to off-site view corridors would result in a significant adverse impact upon the visual quality of the environment of the Oakland Hills.

3.2-D. City of Oakland General Plan. The proposed project is considered to be inconsistent with the General Plan policy requiring development to be related sensitively to the natural setting, with scale and intensity of development bearing a reasonable relationship to the physical characteristics of the site.

As discussed in Section 3.1, "Land Use and Planning," the proposed project is also not consistent with the General Plan requirement that every development of substantial size (in the Hills) should reserve the most appropriate portions as permanent open space.

View Corridors. Development in certain areas of the site would have more significant visual impacts than other areas. Specifically, development in the northern section of the project site located along the drainage swale would result in the most significant visual change. Wooded slopes at this location, including native coast live oak, would have to be almost completely eliminated to accommodate grading for residences throughout this section of the site. As Plates 3, 4, and 6 indicate, this area of the site is highly visible to Redwood Road and proximate and distant locations within Redwood Park. Development near Redwood Road will change the environment along the roadway if residences are not adequately screened by vegetation. Since the applicant has not submitted a landscaping plan it is not presently possible to determine if the remaining eucalyptus trees will remain to partially screen the residences from Redwood Road. The visual impact of introduction of structures to the site would not be significant in relation to Redwood Regional Park if development were concentrated along Redwood Road, because these structures would be hidden by intervening slopes and vegetation within the canyon. However, the visual impact of the introduction of structures along Redwood Road would be a significant visual impact to motorists on Redwood Road if they are not properly visually screened. In order to decrease visual impacts to both Redwood Road and the park, a balance would need to be achieved in siting of the homes, due to site topography and appropriate screening would need to be utilized. Significant visual impacts will occur in conjunction with proposed development in the site. They would be most pronounced in the site's northern swale (Plates 4b and 6b).

As mentioned, the project would significantly alter the view from the view corridor of Redwood Road. Approximately 52 eucalyptus trees will be removed to accommodate the residences (Jones, 1992). This will change the current wooded corridor of Redwood Road adjacent to the project site (Plates 1 and 2) to a developed residential area. An eight-foot retaining wall approximately 70 feet in length will run roughly parallel to Redwood Road at the southern end of the project site before angling behind the residence on Lot 17 (see Figure 3.4-4). A parking area would be built adjacent to Redwood Road on this southern portion of the site. Several eucalyptus trees in this area are planned to be preserved and will serve to partially screen this area from the view of motorists and pedestrians on Redwood Road. Residences adjacent to Redwood Road (Lots 1, 17, 18, 19, and 20) will be very prominent from this roadway. Setbacks of homes from the roadway vary from approximately 30 to 60 feet. The five- to seven-foot side yard setback between homes and their property lines on Lots 17, 18, and 19 will add to the walled-off effect along Redwood Road. This would be a significant adverse impact to views from Redwood Road.

Public views of the site from Redwood Regional Park (as shown in Plate 4a and 4b) in this case from hiking, bicycling and equestrian trails, would be significantly impacted. The topography of the site contributes to the prominence as does the multi-levels and density of the residences. The height and density of the residential structures do not blend with the lower density residences in the development on the ridgetop.

Plate 5b illustrates that views facing east from the opposite side of Redwood Canyon from the site would be significantly altered. The wooded character of

the canyon slope would be changed due to the tree removal requirements of the residences.

The long distance view facing southeast from Dunn Trail in Redwood Park, shown in Plate 6a, would be altered. The project would appear in the shape of a "V," as shown in Plate 6b, from this vantage point.

Private views from neighboring Skyline Ranch, as shown in Plate 7a would be altered from grassy slopes, eucalyptus trees, and scattered oaks. The project applicant has proposed a lot line adjustment which would allow development on a small triangular parcel of property which is part of the former horse ranch and this is reflected in Plate 7b (see also Figure 1.2-1). As shown in Plate 7b, homes would be prominent from this location. Private views from the ridgetop residences would also be altered.

View Opportunities. The proposed project would result in the creation of many view opportunities for future residents of the site. Residents of the homes on upper elevations of the slope will be provided with vistas of wooded parkland.

MITIGATION MEASURES

The following mitigation measures are designed to reduce the significant adverse impacts identified previously to less-than-significant levels, unless otherwise indicated:

3.2-A Visual impacts of the project cannot be mitigated below a level-of-significance except through revisions in the site plan including reduction in density of the proposed residences to harmonize with the density of the ridgetop development and to be compatible with the physical characteristics of the site. The site plan should be revised to reduce visual impacts to both the Redwood Road View Corridor and view corridors from Redwood Regional Park. Reducing the scale and intensity of development and avoiding sensitive view corridors including eliminating development in the northern drainage swale, as well as designing appropriate fire resistant vegetative screening would mitigate this significant impact to a less-than-significant level (see Section 4, "Alternatives to the Proposed Project"). However, this is a significant unavoidable impact of the proposed development.

Exterior building materials should be fire resistant materials that are natural in appearance, in order that the development remain subordinate to the site's natural setting.

The architectural design characteristics of the residential units should be evaluated by the Design Review Committee.

The project applicant should submit a landscape plan to the city for approval. The landscape plan should serve to soften the visual impacts of the development and should utilize native drought tolerant and fire resistant vegetation.

3.2-B Exterior lighting should be minimized. Lighting that is necessary should be of low profile design. Reflective surfaces should be moderated and not used in large expanses in a single plane. Reflective surfaces potentially visible from Redwood Park should be required to have non-reflective coatings. Low pressure sodium vapor lamps should be used in the development.

3.2-C Where feasible, utility lines should be undergrounded.

3.2-D General Plan inconsistency in the site plan cannot be mitigated below a level of significance except through revisions in the site plan including reduction in density and scale of residences and the provision of open space areas. Reducing the scale and intensity of development and avoiding sensitive view corridors along Redwood Road and sensitive view corridors from Redwood Park would mitigate this significant impact to a less-than-significant level (see Section 4, "Alternatives to the Proposed Project"). However, this is a significant unavoidable impact of the proposed development.



FIGURE 3.3-1 REGIONAL AND LOCAL ROADWAYS IN THE PROJECT VICINITY

3.3 TRAFFIC AND PARKING

EXISTING SETTING

Regional Access. Traffic access to and from the subject site is provided by Interstate 580 (I-580), also known as the MacArthur Freeway. I-580 is an eight-lane facility (with a median) which runs north/south through central Oakland. It serves as a major route to Interstate 80 (I-80) in the north, to Hayward in southern Alameda County, and to Livermore in eastern Alameda County. The P.M. peak hour traffic volume on I-580 at the 35th Avenue Interchange is 16,200; the P.M. peak hour volume is 12,400 at the junction of State Route 13 and I-580 (Tsuda, 1992). During the peak period, congestion on I-580 occurs in Oakland between Harrison and High Streets, east of the Bay Bridge Interchange; and in southern Alameda County congestion on I-580 occurs between Hayward and Livermore.

State Route 13 (SR-13) is also a major route in the East Bay. SR-13 can be accessed from Redwood Road. In the vicinity of Redwood Road, SR-13 consists of two lanes in each direction; the P.M. peak hour traffic volume on SR-13 is approximately 4,400 vehicles in the southbound direction and 5,400 vehicles in the northbound direction (Tsuda, 1992).

Local Access. Arterial roadways provide travel through Oakland and Berkeley in the project vicinity. These roadways are relatively high-capacity roads, receiving traffic from collectors and local roads. Arterial roads in the vicinity of the project site include Redwood Road and Skyline Boulevard (see Figure 3.3-1). Redwood Road connects Skyline Boulevard to both SR-13 and I-580 freeways. Redwood Road consists of two lanes in each direction with a median south of Skyline Boulevard; on the north side of Skyline Boulevard Redwood Road has one lane in each direction. In the project vicinity, Redwood Road has a narrow and winding (20 feet wide) pavement with 30 foot right of way. The posted speed limit ranges from 30 to 35 miles per hour (mph); however, the 85th percentile speed is approximately 40 mph (Preston, 1992). Based on the traffic counts conducted by CERTIFIED/Earth Metrics on June 11, 1991 at the intersection of Redwood Road and Skyline Boulevard, Redwood Road carries traffic volumes of approximately 365 vehicles during the P.M. peak hour at its intersection with Skyline Boulevard.

Skyline Boulevard is a major north-south route traversing the top ridges of the Oakland Hills from near the Caldecott Tunnel to Grass Valley Road. In the vicinity of the subject site, Skyline Boulevard consists of two lanes in each direction separated by a 10 to 20 foot-wide median. Parking is allowed on both sides of the street. The traffic counts conducted by CERTIFIED/Earth Metrics on June 11, 1991, indicated that Skyline Boulevard in the project vicinity carries traffic volumes of approximately 460 vehicles during the P.M. peak hour.

The A.M. peak hours of the traffic on Skyline Boulevard are associated with Skyline High School, which is on Skyline Boulevard southeast of the project site. The peak traffic periods coincide with the morning arrival time of students between 7:30 and 8:15 A.M. (EIP Associates, 1988).

Traffic volume data were compiled from data published by the California Department of Transportation (CALTRANS) and the County of Alameda Department of Public Works. To assess the characteristics of the existing street system in the vicinity of the project, P.M. peak hour traffic volumes were counted on June 11, 1991 at a key intersection on Redwood Road and Skyline Boulevard (see Figure 3.3-2) by CERTIFIED/Earth Metrics. Traffic data sheets can be found in Appendix D. The intersection of Skyline Boulevard/Redwood Road is signalized and operates with actuated control; however, traffic on Skyline Boulevard turning left onto Redwood Road is on the same time frequency as the southbound traffic on Skyline Boulevard.

To assess the P.M. peak hour operation of the intersection, a level of service (LOS) analysis was performed using the peak hour counts collected. The volume-to-capacity (V/C) ratio and level of service for the intersection was calculated based on the operational methods described by the Highway Capacity Manual. A LOS analysis provides a standardized method of rating an intersection or roadway operating characteristic by relating traffic volumes to intersection or roadway capacity. The potential LOS ranges from LOS A to LOS F, with LOS A representing the best possible or virtually free flow conditions, and LOS F representing the worst possible or jammed conditions. The methodology for signalized intersections determines the LOS based upon traffic volume to intersection capacity ratio and evaluates the intersection as a whole. A description of the potential LOS for the signalized intersection is provided in Table 3.3-1.

The LOS analysis completed for this study focused on the P.M. peak hour as determined from the traffic count conducted at the intersection of Skyline Boulevard/ Redwood Road. The P.M peak hour provides a worst case scenario when both traffic volumes on surrounding roadways and project trip generation are greatest. The result of the analysis indicates that the intersection of Redwood Road/Skyline Boulevard operates at LOS B.

Roadway Improvement. Based on the City of Oakland long-term programs for road improvements, there are no immediate plans to improve any of the major or local roadways in the project vicinity (Wlassowsky, 1991).

Local Transit Service. The nearest bus stops are located on east and west bound directions on Skyline Boulevard. The bus stops are within a ten minute walking distance from the project site (see Figure 3.3-2). Interregional and local service is provided by Alameda Contra Costa Transit Service (AC Transit) BUS 46, which runs every half hour (AC Transit, 1992). Local routes provide interregional transit service to and from Skyline Boulevard; however, there is no bus service from Skyline to the north of Redwood Road along the project site. There is also no bus service from Campus Drive along Redwood Road to the junction of Skyline Boulevard and Redwood Road.

IMPACTS

Standard of Significance. If a project causes a substantial increase in traffic in relation to the existing traffic load and capacity of the street system, the impact should be considered significant. If project traffic would create, contribute to, or be subject to unduly hazardous or unsafe roadway conditions, the impact should also be considered significant.

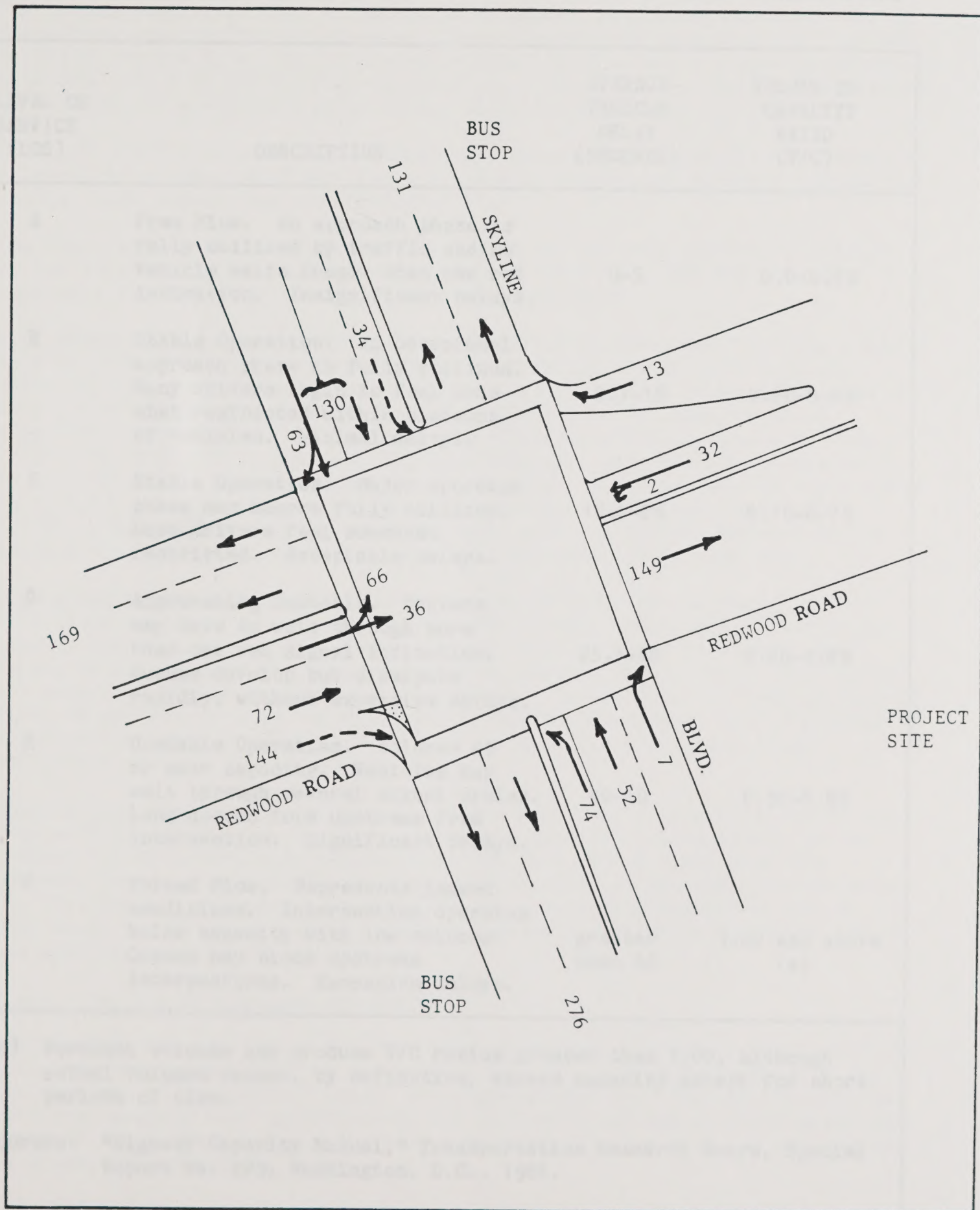





FIGURE 3.3-2 INTERSECTION CONFIGURATION AND EXISTING PM PEAK HOUR TRAFFIC VOLUME AT THE REDWOOD RD./SKYLINE BLVD. INTERSECTION

Table 3.3-1. DESCRIPTIONS OF LEVELS OF SERVICE FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE (LOS)	DESCRIPTION	AVERAGE VEHICLE DELAY (SECONDS)	VOLUME TO CAPACITY RATIO (V/C)
A	Free Flow. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Insignificant delays.	0-5	0.0-0.59
B	Stable Operation. An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. Minimal delays.	5.1-15	0.60-0.69
C	Stable Operation. Major approach phase may become fully utilized. Most drivers feel somewhat restricted. Acceptable delays.	15.1-25	0.70-0.79
D	Approaching Unstable. Drivers may have to wait through more than one red signal indication. Queues develop but dissipate rapidly, without excessive delays.	25.1-40	0.80-0.89
E	Unstable Operation. Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. Significant delays.	40-60	0.90-0.99
F	Forced Flow. Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections. Excessive delays.	greater than 60	1.00 and above (a)
(a) Forecast volumes may produce V/C ratios greater than 1.00, although actual volumes cannot, by definition, exceed capacity except for short periods of time.			
Sources: "Highway Capacity Manual," Transportation Research Board, Special Report No. 209, Washington, D.C., 1985.			
"Interim Materials on Highway Capacity," Transportation Research Board, Circular No. 212, Washington, D.C., January 1980.			

The specific criteria used to determine an impact as significant are: (1) if project-related traffic would cause a deterioration in peak hour LOS B to LOS D, LOS E, or LOS F; or (2) if project-related traffic would reduce an existing peak hour LOS D to LOS E or an existing LOS E to an LOS F. This is consistent with generally accepted traffic impact analysis procedures.

Also, if traffic line-of-sight distance is inconsistent with City Standards or if conditions under which project traffic will merge with existing traffic are unsafe, then impacts are significant.

The following analysis identifies the impact the proposed project would have on the existing street system in the project vicinity. The analysis also considers the impact of the proposed project roadway.

Trip Generation. Trips which would be generated by development of the project site as proposed (with 23 single-family residential units) were estimated using Institute of Transportation Engineers standard trip generation rates for single-family, detached residential units (Institute of Transportation Engineers, 5th Edition (1991)). Table 3.3-2 indicates the proposed 23-unit project is forecast to generate 232 trips per day, of which five trips would be inbound and 13 trips outbound during the A.M. peak hour, and 15 trips would be inbound and nine trips outbound during the P.M. peak hour (see Table 3.3-2). The project traffic would increase existing traffic volumes in the project vicinity by 24 vehicular trip ends during the P.M. peak hour.

Trip Distribution. Trips which would be generated by the proposed project were distributed to the surrounding roadway network based upon the existing traffic circulation pattern observed in the area. Of the project-related trips, it was assumed that approximately 68 percent of the trips would be to and from the west of Redwood Road, two percent to and from the east of Redwood Road, 15 percent to and from the south of Skyline Boulevard, and 15 percent to and from the north of Skyline Boulevard. Figure 3.3-3 provides trips assignment for the distribution pattern.

Roadway Operating Characteristics. Future operating characteristics of the Redwood Road and the intersection of Redwood Road/Skyline Boulevard in the project vicinity were also evaluated in the form of P.M. peak hour LOS analysis based on the traffic volumes. The results of the analysis indicate the intersection of Redwood Road/Skyline Boulevard will operate at LOS B. This would result in a minimal delay on Redwood Road/Skyline Boulevard and is not considered a significant impact.

3.3-A. On-Site Circulation and Parking.

CIRCULATION. The site plan for the proposed project indicates that a 16-foot-wide, one-way roadway with no sidewalks will enter from Redwood Road at the southern end of the project site. The roadway will loop through the site and exit onto Redwood Road approximately 400 feet north of the entrance point (see Figure 3.3-4). The grade of the proposed roadway varies from 7.5 percent to 20.6 percent (see Figure 3.3-5).

The width of the access road is not consistent with the City of Oakland Municipal Code Chapter 7, Article 4, Section 7-4.53, which states that "In

TABLE 3.3-2. PROJECT TRIP GENERATION

USE	SIZE	AVERAGE DAILY TRAFFIC		A.M. PEAK HOUR		P.M. PEAK HOUR	
		FACTOR ^(a)	TRIPS	FACTOR ^(a)	TRIPS	FACTOR ^(a)	TRIPS
				IN/OUT	IN/OUT	IN/OUT	IN/OUT
SFR	23 DU	10.062	232	0.0204/0.0550	5/13	0.0633/0.0372	15/9
(a) - Trips per Dwelling Unit, Institute of Transportation Engineers, 5th Edition (1991). DU - Dwelling Unit SFR - Single Family Residential IN/OUT - Inbound/Outbound Source: CERTIFIED/Earth Metrics, 1992.							

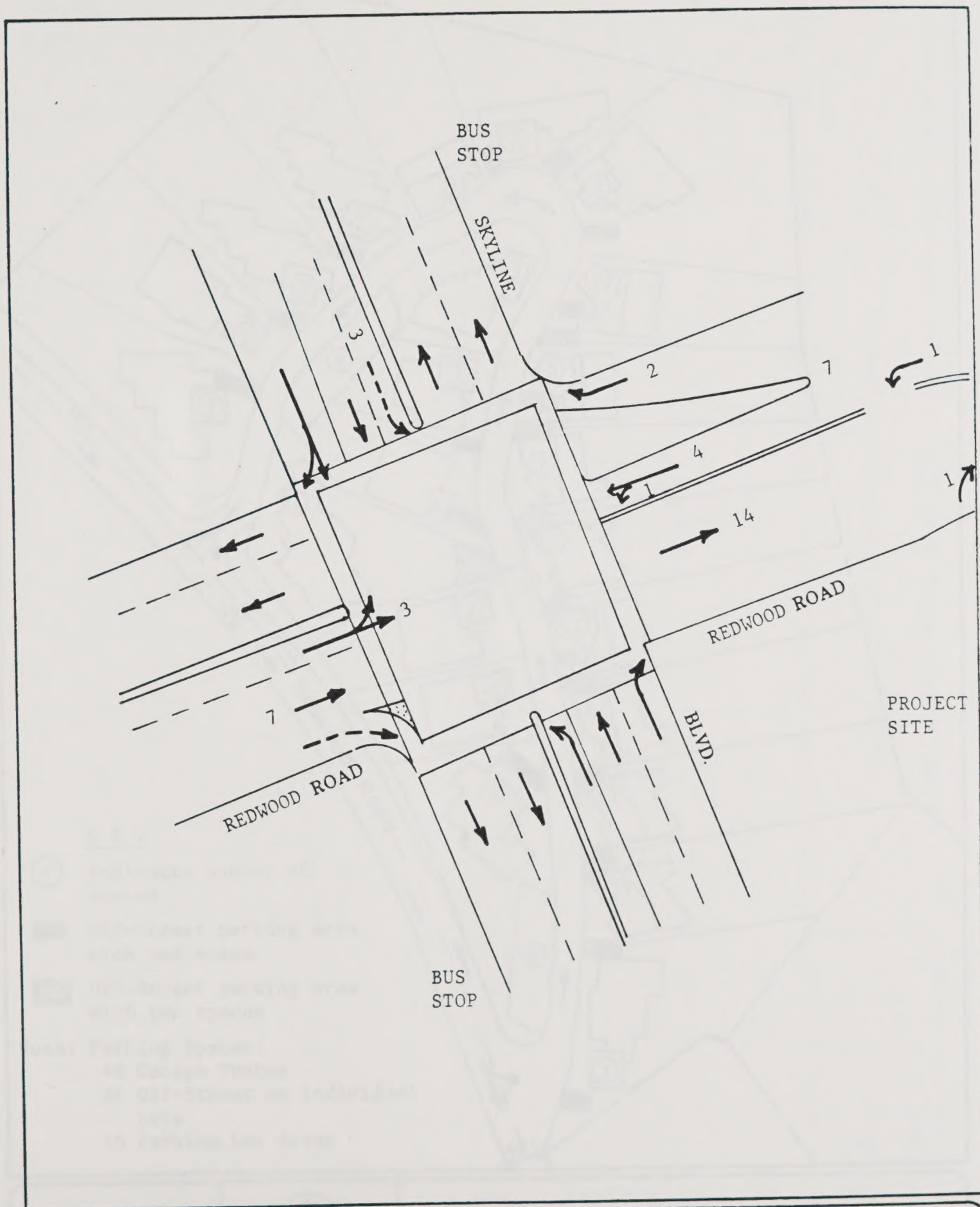


FIGURE 3.3-3 PROJECT RELATED TRIP DISTRIBUTION AT THE REDWOOD ROAD/SKYLINE BOULEVARD INTERSECTION

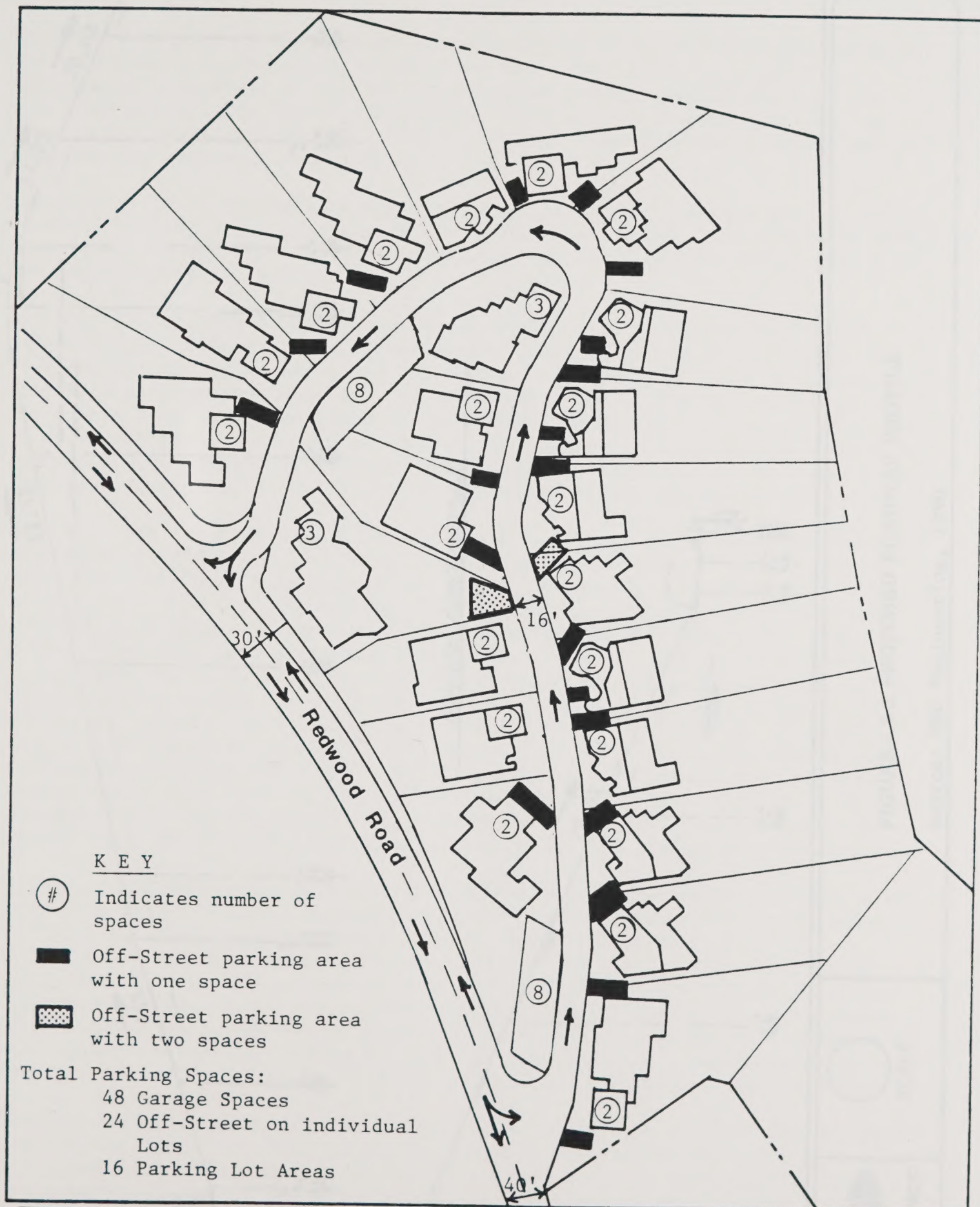
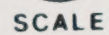
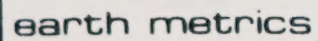


FIGURE 3.3-4 PROPOSED TRAFFIC CIRCULATION ON THE PROJECT SITE AND OFF-STREET PARKING AREAS INCLUDING GARAGE



Source: MSD Engineering, 1990

hillside subdivisions the dedicated widths of all streets, other than arterial and collector streets, shall be not less than forty (40) feet. With lot frontage on both sides of the street the paved roadway widths shall be not less than thirty (30) feet." Therefore, the proposed 16 foot wide one-way road is not consistent with the City of Oakland standards and it would not be adequate for emergency vehicles.

Section 7-4.54 of the Oakland Municipal Code also requires that for lot areas of less than one acre, in hillside subdivisions where lots front on both sides of a street, a five foot paved sidewalk on both sides of the street should be provided (Chapter 7, Article 4).

The site plan should be redesigned according to city standards to include adequate road width that would provide simultaneous access to residents and fire engines during an emergency. It should also be redesigned to include a five foot paved sidewalk on both sides of the street. The proposed width of the access road is not adequate to accommodate on-street parking for visitors. If on-street parking were to be allowed, there is the potential for conflicts between automobiles, bicycles, and pedestrians. Therefore, it is recommended that parking should be prohibited on both sides of the project roadway.

PARKING. For the purposes of evaluating the adequacy of proposed off-street parking facilities, the following standard is used: one off-street parking space for each three habitable rooms and an additional 0.2 spaces for each dwelling unit for visitor parking (NiDana, 1992). Habitable rooms are determined in accordance with Section 7033 of the Zoning Ordinance. The proposed project was calculated as having 186 habitable rooms. The parking standard would therefore be 62 off-street parking spaces for residents and five off-street parking spaces for visitors. Based on the site plan, a total of 88 off-street parking spaces would be provided. This would include 48 parking spaces in garages; 24 spaces in parking areas on lots; 8 parking spaces in a parking lot near Lot 17; and 8 parking spaces in a lot adjacent to the proposed roadway near Lots 21, 22, and 23 (see Figure 3.3-3). This total exceeds the off-street parking standard for the proposed project, even without the provision of the 16 additional spaces planned for the two parking lot areas.

3.3-B. SIGHT DISTANCE. To quantify the adequacy of the sight distance of the proposed project roadway in conjunction with Redwood Road, a sight distance analysis was performed (see Table 3.3-3). Based on the four possible movements to and from the project site and the 85th percentile speed of 45 mph. The speed study was conducted by the City of Oakland between November 12, and 16, 1992. Three out of four possible traffic movements into and out of the site pose a significant impact to the traffic circulation on Redwood Road as well as traffic trying to enter or exit the site. Adequate access to the site is expected only for traffic traveling northbound on Redwood Road.

Traffic traveling southbound on Redwood Road and seeking project site access could cause delay for other southbound traffic (an estimated 62 vehicles at P.M. peak hour including project traffic) since there is not adequate space for a turning pocket. However, this delay would not be significant. In addition, vehicles traveling southbound on Redwood Road will not have adequate sight distance for safe stopping as they approach cars waiting to make a left

TABLE 3.3-3. SAFE STOPPING SIGHT DISTANCE, REDWOOD ROAD/SITE ROADWAY

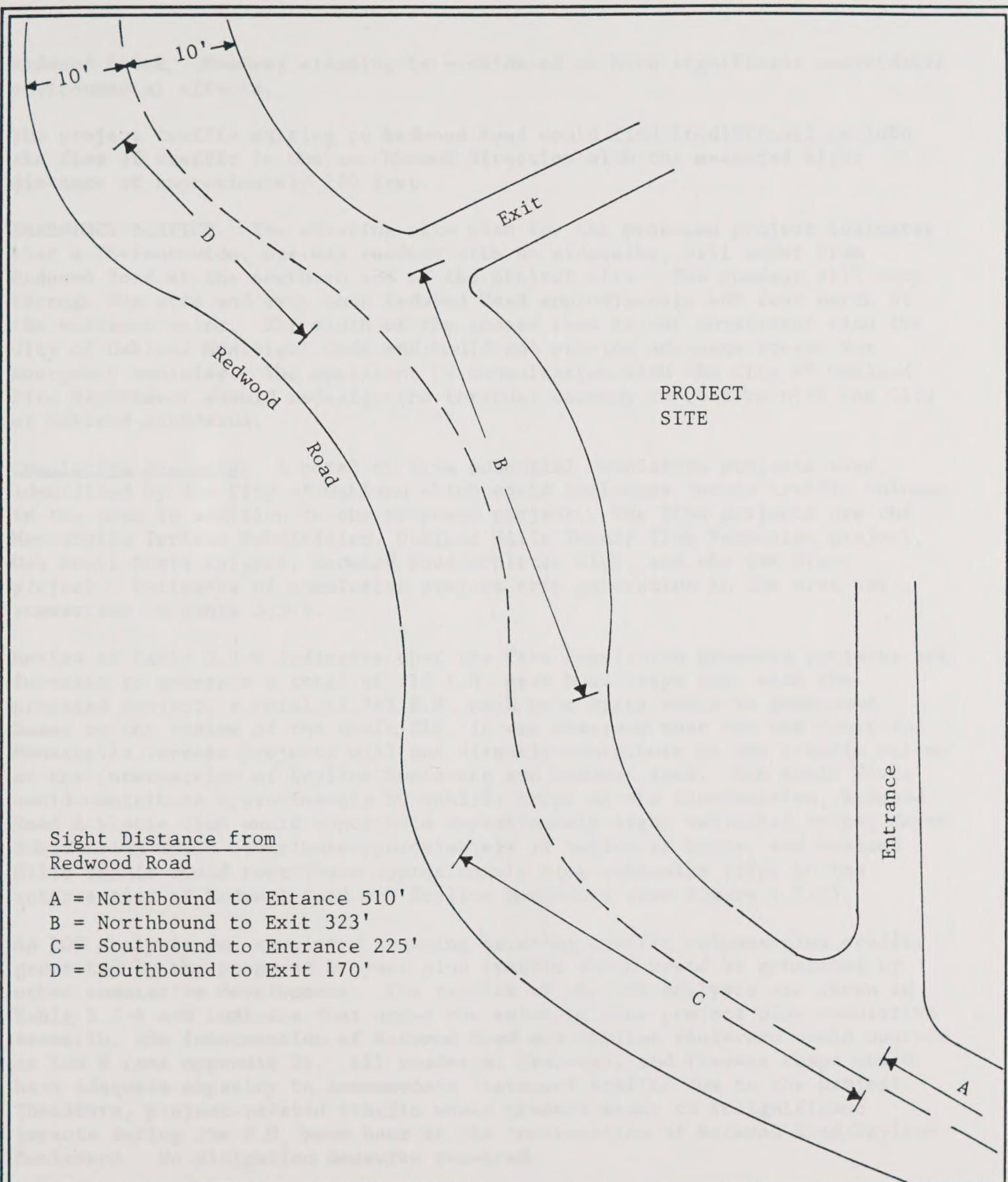
LOCATION	SIGHT DISTANCE MEASURED ^(a)	SIGHT DISTANCE REQUIRED ^(a) (WET PAVEMENT)	SAFE STOPPING COMMENTS
Northbound on Redwood Road to Entrance to site	510	400	YES
Northbound on Redwood Road to Exit from site	323	400	NO
Southbound on Redwood to Entrance	225	400	NO
Southbound on Redwood to Exit from site	170	400	NO
(a) Distance in feet.			
Sources: A Policy On Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 1990; CERTIFIED/Earth Metrics, 1992.			

turn into the project entrance. The existing road pavement width is limited to 20 feet. The current critical speed is approximately 45 miles per hour (Preston, 1992). The measured sight distance of traffic traveling southbound on Redwood Road to the project roadway entrance is 225 feet. The sight distance required for safe stopping at the critical speed for this roadway is 400 feet. Therefore, there is inadequate sight distance on this section of Redwood Road for turning movements into the project site. Traffic Northbound on Redwood Road have a sight of the project exit at 323 feet but need 400 feet of stopping distance (see Figure 3.3-6).

The sight distance impact may be resolved by two methods. The project entrance and exit drives may be re-located to meet sight distance standards. The other alternative is to widen Redwood Road to provide for left and right turn pockets.

The project applicant should seek to relocate entrance and exit drives to meet sight distance standards required by the City of Oakland. Proving that the entrance and exit drive design provides adequate sight distance is the project applicants responsibility.

Widening of Redwood Road must be approved by the City of Oakland and Alameda County. Costs of roadway widening would be borne by the applicant. Widening will increase grading impacts and would adversely affect



(Not To Scale, Curvature of the Roadway may be exaggerated)

FIGURE 3.3-6
SIGHT DISTANCE DIAGRAM



CERTIFIED/Earth Metrics

Redwood creek. Roadway widening is considered to have significant unavoidable environmental effects.

The project traffic exiting to Redwood Road would find it difficult to join the flow of traffic in the southbound direction with the measured sight distance of approximately 170 feet.

EMERGENCY SERVICE. The existing site plan for the proposed project indicates that a 16-foot-wide, one-way roadway with no sidewalks, will enter from Redwood Road at the southern end of the project site. The roadway will loop through the site and exit onto Redwood Road approximately 400 feet north of the entrance point. The width of the access road is not consistent with the City of Oakland Municipal Code and would not provide adequate access for emergency vehicles. The applicant in consultation with the City of Oakland Fire Department should redesign the internal roadway to conform with the City of Oakland standards.

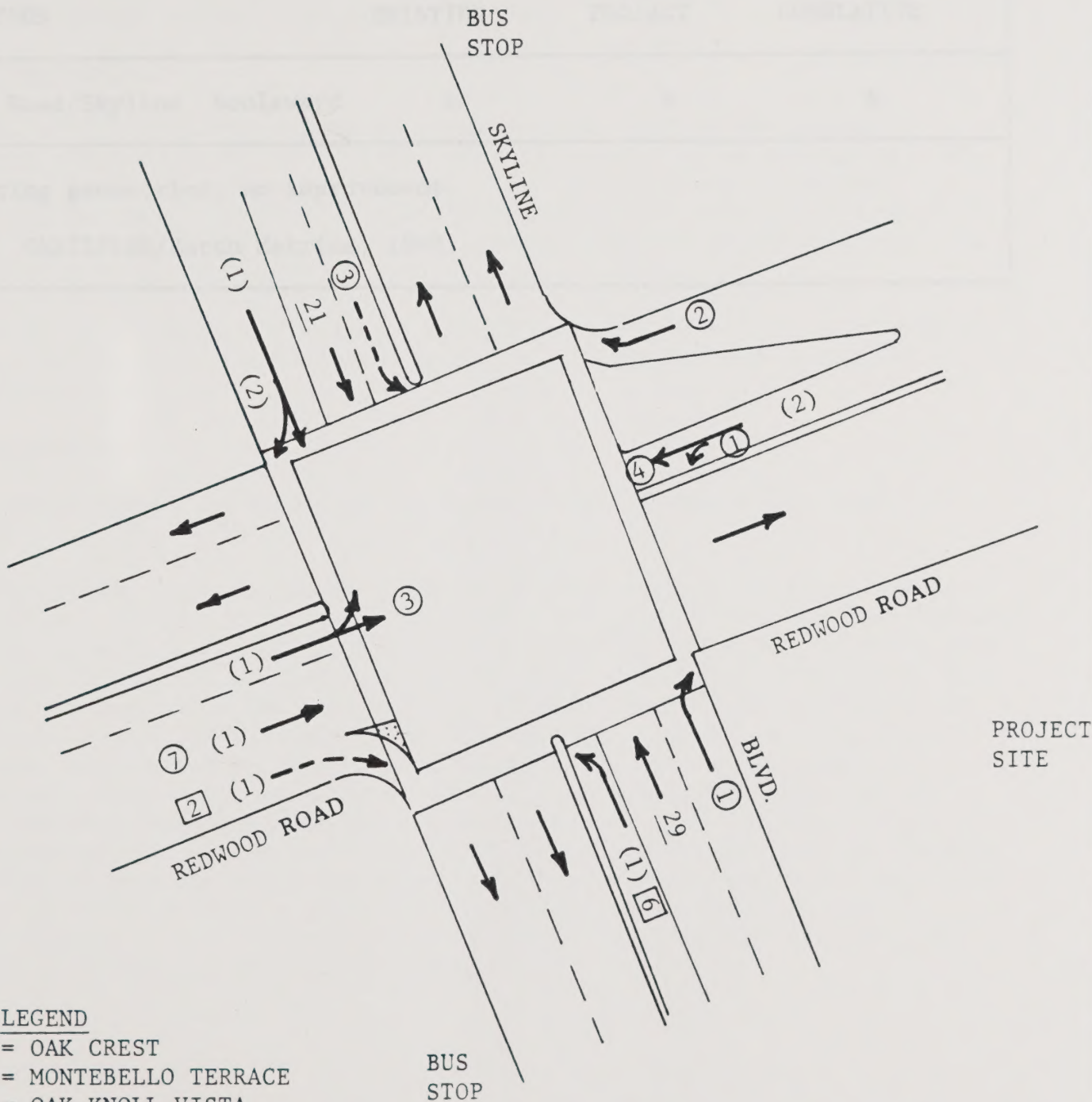
Cumulative Scenario. A total of five potential cumulative projects were identified by the City of Oakland which could influence future traffic volumes in the area in addition to the proposed project. The five projects are the Montebello Terrace Subdivision, Oakland Hills Tennis Club Expansion project, Oak Knoll Vista Estates, Redwood Road Athletic Club, and the Oak Crest project. Estimates of cumulative project trip generation in the area are summarized in Table 3.3-4.

Review of Table 3.3-4 indicates that the five cumulative proposed projects are forecast to generate a total of 318 P.M. peak hour trips and, with the proposed project, a total of 341 P.M. peak hour trips would be generated. Based on the review of the Draft EIR, it was observed that the Oak Crest and Montebello Terrace projects will not directly contribute to the traffic volume at the intersection of Skyline Boulevard and Redwood Road. Oak Knoll Vista would contribute approximately 50 vehicle trips at the intersection, Redwood Road Athletic Club would contribute approximately eight vehicular trips, Mayer Subdivision would contribute approximately 21 vehicular trips, and Oakland Hills Tennis would contribute approximately nine vehicular trips to the intersection of Redwood Road and Skyline Boulevard (see Figure 3.3-6).

An LOS analysis was completed assuming existing traffic volumes plus traffic generated by the proposed project plus traffic which would be generated by other cumulative development. The results of the LOS analysis are shown in Table 3.3-4 and indicate that under the existing plus project plus cumulative scenario, the intersection of Redwood Road and Skyline Boulevard would operate at LOS B (see Appendix D). All roadways, freeways, and freeway ramps would have adequate capacity to accommodate increased traffic due to the project. Therefore, project-related traffic would produce minor to insignificant impacts during the P.M. peak hour at the intersection of Redwood Road/Skyline Boulevard. No mitigation measures required.

TABLE 3.3-4. CUMULATIVE PLUS PROJECT TRIP GENERATION

PROJECT NAME	SIZE/USE	EVENING PEAK HOUR TRIPS		
		ENTER	EXIT	TOTAL
1. Montebello Terrace Subdivision	70/SFR	45	25	70
2. Oakland Hills Tennis Club Expansion	7,255 Sq. Ft./ Athletic and Banquet Facilities	46	12	58
3. Oak Knoll Vista Estates	46/SFR	29	17	46
4. Redwood Athletic Club	36,000 Sq. Ft./ Fitness/Recreation Facility	67	43	110
5. Oak Crest	32/SFR & TH	22	12	34
6. Mayer Subdivision (Project Site)	23/SFR	15	8	23
TOTAL TRIPS		224	117	341
SFR = Single Family Residential TH = Town Houses Sources: 1) LSA Associates, Inc. (1987) 2) EIP Associates (1988) 3) LSA Associates, Inc. (1990) 4) EIP Associates (1985) 5) EIP Associates (1990) 6) CERTIFIED/Earth Metrics (1991)				



LEGEND

- N/A = OAK CREST
- N/A = MONTEBELLO TERRACE
- XXX = OAK KNOLL VISTA
- (XXX) = REDWOOD ATHLETIC CLUB
- (XXX) = MEYER HEIGHTS SUBDIVISION
- [XXX] = OAKLAND HILLS TENNIS CLUB EXPANSION
- N/A = Not Applicable



FIGURE 3.3-7 CUMULATIVE TRIP DISTRIBUTION AT THE REDWOOD RD./SKYLINE BLVD. INTERSECTION

TABLE 3.3-5. PROJECTED P.M. PEAK HOUR LEVELS OF SERVICE

INTERSECTION	LOS EXISTING	EXISTING+ PROJECT	PROJECT+ CUMULATIVE
Redwood Road/Skyline Boulevard	B	B	B
* Existing geometrics, no improvement. Source: CERTIFIED/Earth Metrics, 1992.			

MITIGATION MEASURES

The following mitigation measures related to traffic and circulation impacts will reduce significant and potentially significant impacts to less-than-significant levels, unless otherwise indicated:

On-Site Circulation

- 3.3-A The project roadway should be redesigned to include the minimum required road width of 40 feet, with 30 feet of paved roadway and two five foot wide sidewalks on either side of the street (Oakland Municipal Code, Chapter 7, Article 4, Sections 7-4.53 and 7-4.54). This will increase the amount of grading required by the project (see Section 3.4, "Geology").
- There is adequate off-street parking, and on-street parking should be prohibited in order to reduce pedestrian, bicycle, and vehicular conflicts.

Sight Distance

In order to mitigate the impact of inadequate sight distance for safe stopping:

- 3.3-B The project sponsor should redesign project roadway entrance and exit drives. Project site access should be designed to meet City of Oakland and Alameda County standards for safe stopping distance. Redwood Road could be widened to provide left and right turn pockets; however, this solution would cause other impacts to the Redwood Road Corridor. In order to provide adequate sight distance and sufficient room for a left-turn pocket on southbound Redwood Road, the western side of Redwood Road would need to be widened, and significant impacts to sensitive creek habitats and aquatic species would result. It is also possible that moving the location of the project entry way north would provide adequate sight distances. A one-way entry and exit could also be provided if only a limited area had adequate safe stopping distances. Note: Redwood Road in the vicinity of the site is under the jurisdiction of Alameda County.

EXISTING SETTING

A preliminary geotechnical engineering investigation was prepared for the proposed project site by Nordmo Associates, Inc. (1991). This investigation contains specific information and recommendations regarding the existing geologic conditions at the proposed project site. The complete geotechnical report may be found in Appendix E. This section of the EIR is based on this preliminary geotechnical engineering investigation as well as additional sources.

Regional Geology, Topography and Slope Stability. The proposed project site is located on a steep slope below the ridge crest within the Oakland Hills (see Figure 3.4-1). The site is underlain by the Joaquin Miller formation which was deposited during the upper Cretaceous period. This formation is comprised of fine to medium grained sandstone, shale, and minor conglomerate, with good to fair slope stability (Nordmo Associates, 1991). The site is not located in any designated or classified mineral resource zones (Alfors, 1991).

The steep slopes of the site are part of the ravine created by the west branch of Redwood Creek. The site faces west and has an overall gradient of approximately 66 percent (see Figure 3.4-2). Tectonic events have tilted depositional layers in the bedrock so that they are at an angle dipping to the east into the hillside except at the ravine banks. These angles contribute to slope stability. At ravine banks, where the angle of depositional layering dips away from the hillside, angles are not tilted enough to be considered as contributing to slope instability (Nordmo, 1992). Although the site is located in the area designated as most susceptible to landsliding by the City of Oakland (City of Oakland, 1974), no evidence of landsliding was found on the site (Nordmo Associates, 1991).

Seismology. Pursuant to the Alquist-Priolo Special Studies Zones Act, the State of California has delineated Special Study Zones (A-P Zones) around active and potentially active faults in California. The proposed site lies outside of the Alquist-Priolo Special Study Zone designated in Oakland (see Figure 3.4-3). There are no known faults located on the proposed project site; however, as is the case all over the Bay Area, the site is located in the vicinity of many active and inactive faults (see Figure 3.4-4). Table 3.4-1 lists the major faults near the site. Many faults in the Bay Area are active and could create intense ground shaking at the proposed project site.

The entire City of Oakland is designated in seismic safety zone four. Zone four has the greatest risk of earthquake-related damage. The Hayward and San Andreas Faults are considered the most likely faults to create large earthquakes in the San Francisco Bay Area. In the past 200 years alone the Hayward Fault has produced two magnitude 6.8 earthquakes and the San Andreas Fault has produced one earthquake of magnitude 6.8, two of magnitude 7, and one of magnitude 8. Estimates reveal a 28 percent probability for a magnitude 7 earthquake on the Hayward Fault between 1990 and 2020. A 23 percent probability has been estimated for a magnitude 7 earthquake on the San Francisco Peninsula segment of the San Andreas Fault between 1990 to 2020 (Nordmo Associates, 1991).

3.4-2

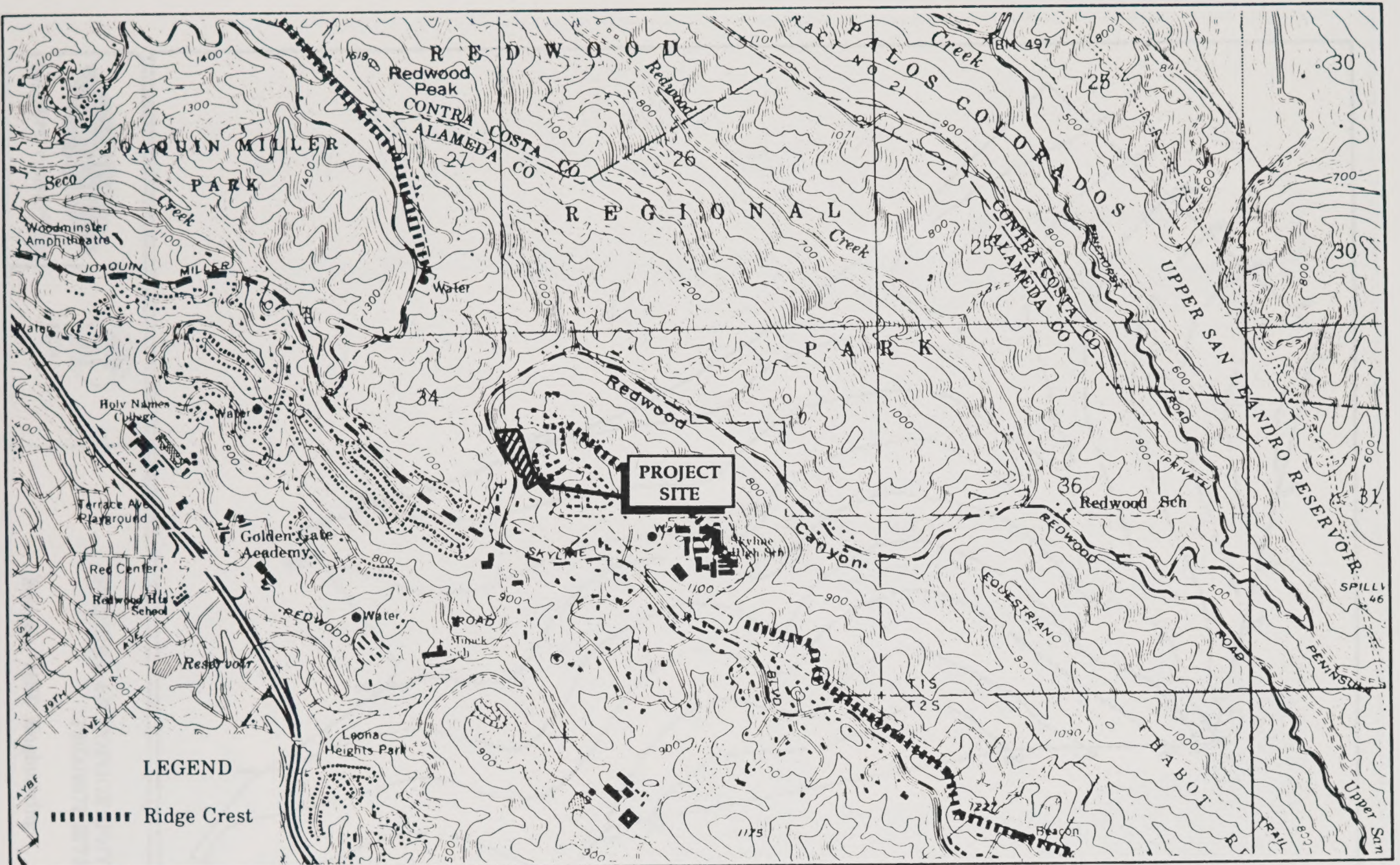
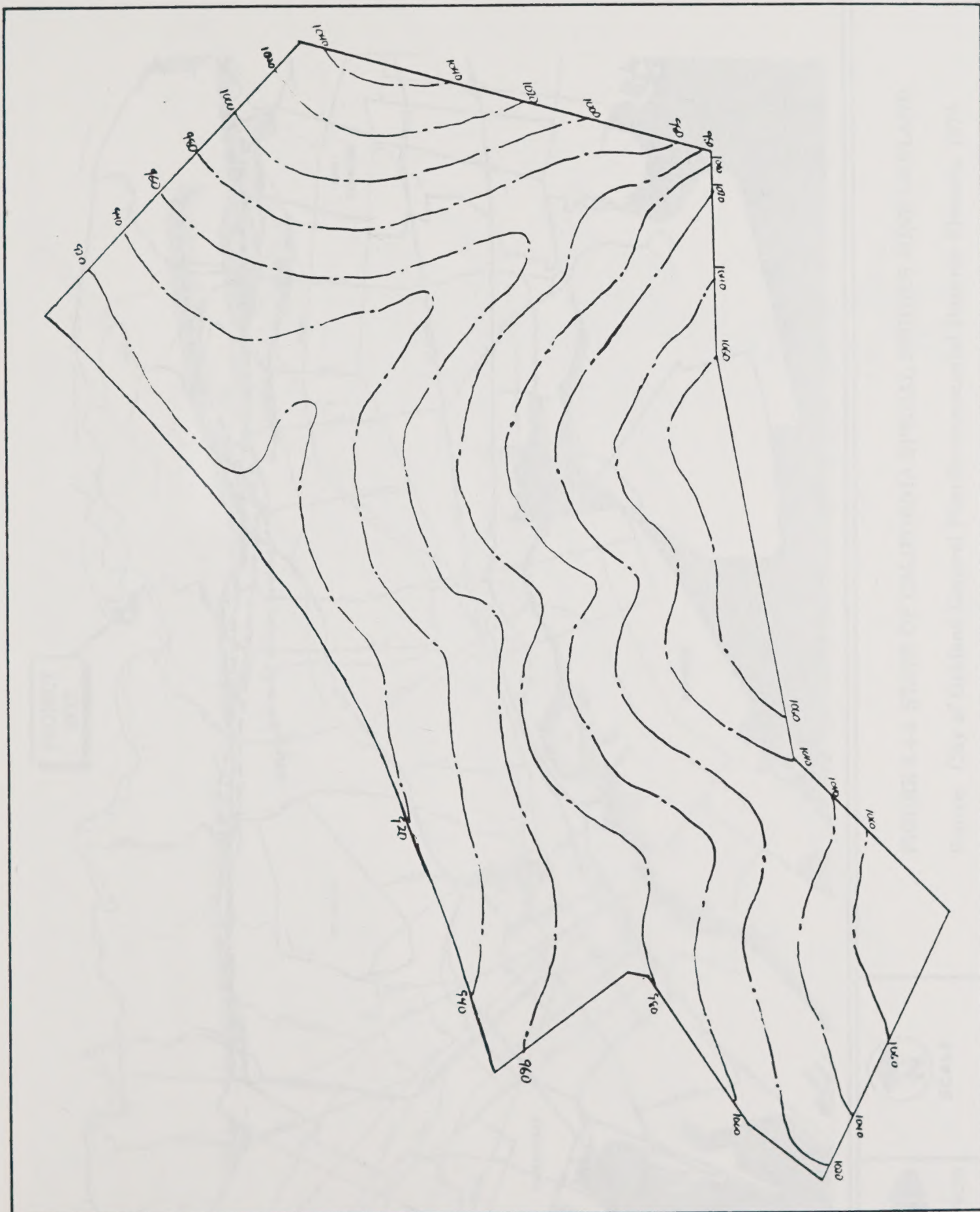


FIGURE 3.4-1 PROJECT LOCATION MAP

Source: USGS Oakland East 7.5 Minute Quadrangle



earth metrics



SCALE

FIGURE 3.4-2 TOPOGRAPHY OF THE PROJECT SITE

Source: MSD Engineering

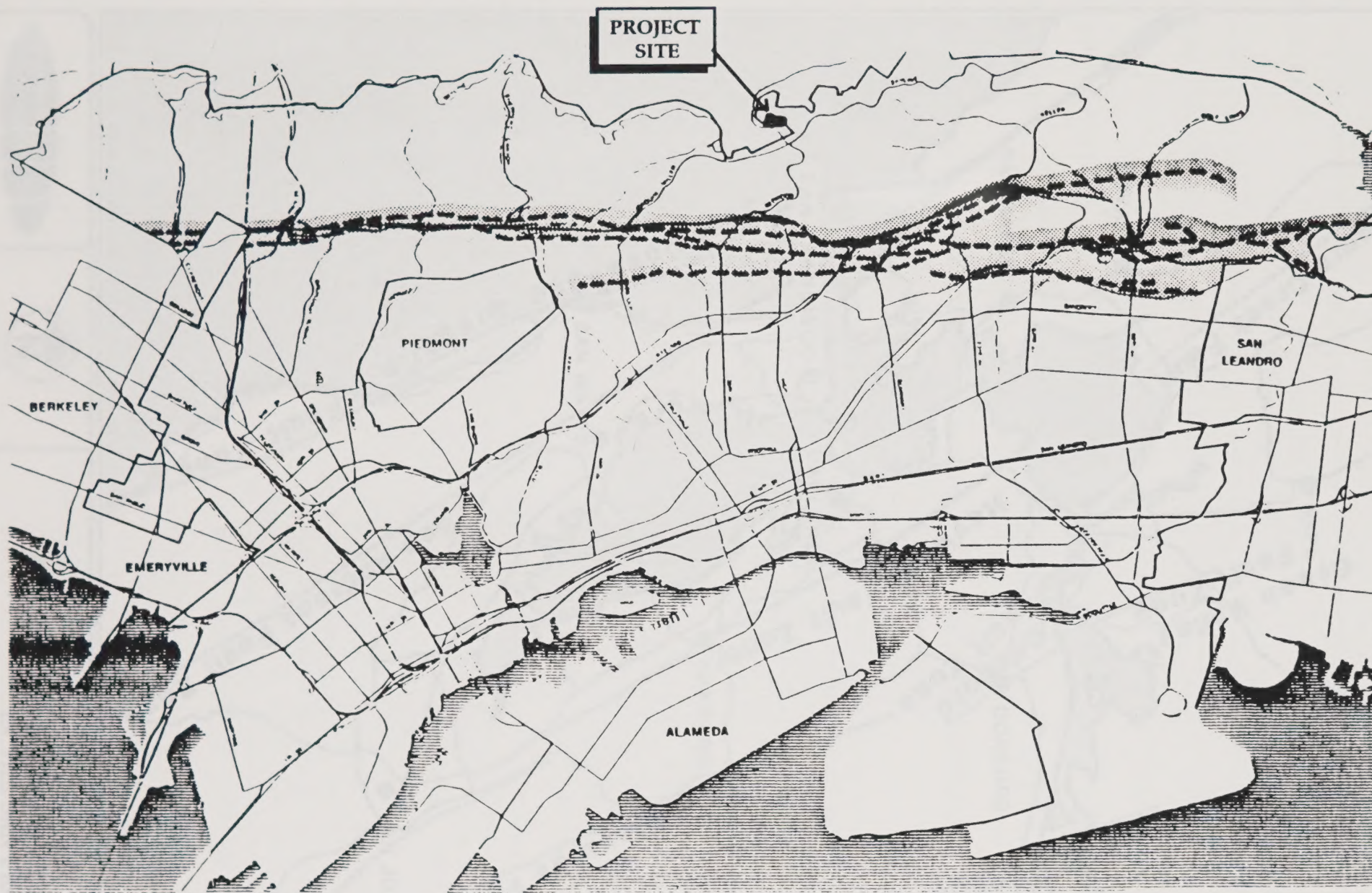
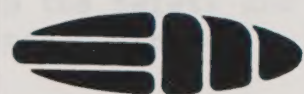
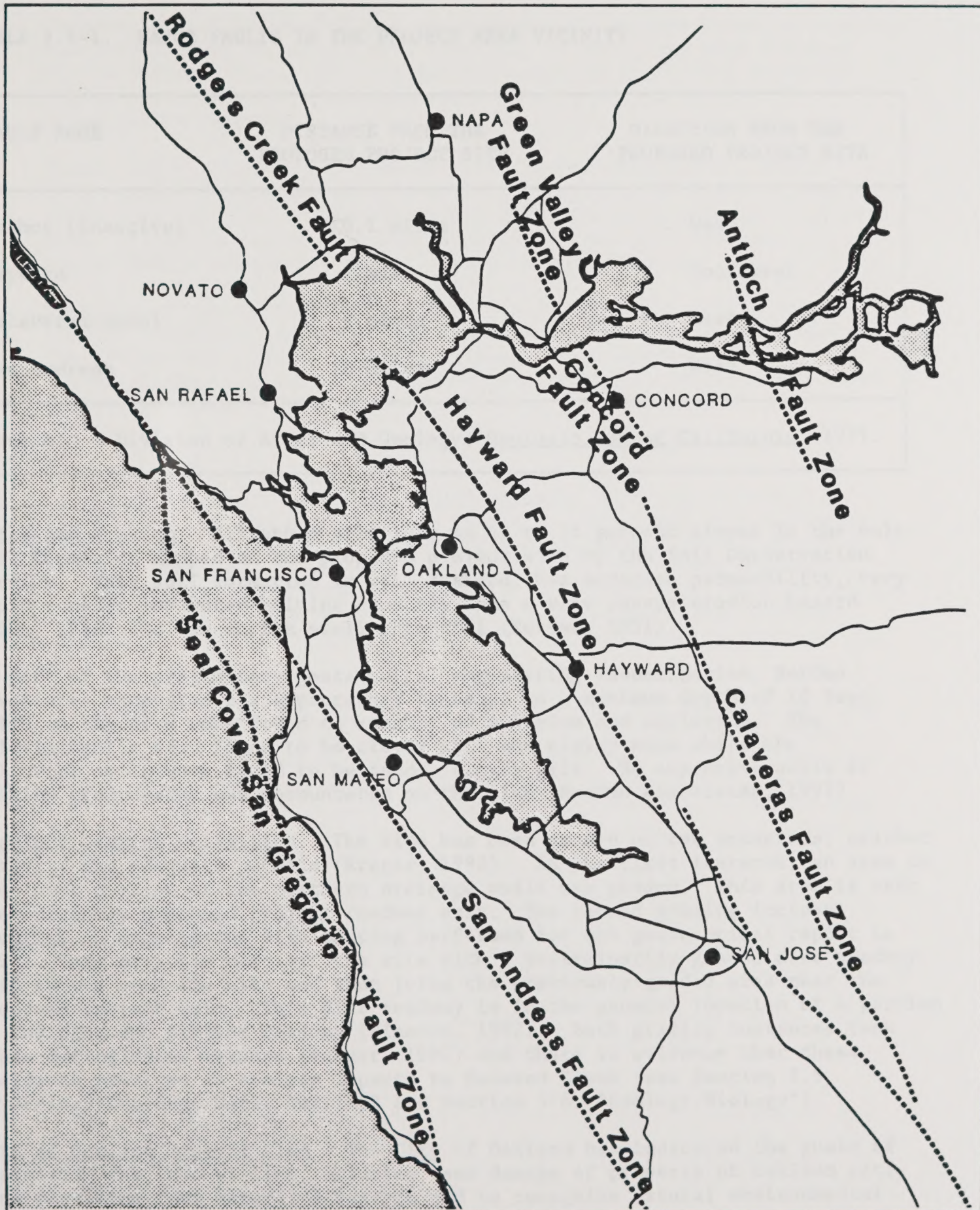


FIGURE 3.4-3 STATE OF CALIFORNIA SPECIAL STUDIES ZONE OAKLAND

Source: City of Oakland General Plan-Environmental Hazards Element, 1974



earth metrics



SCALE
.5" = 5 Miles

FIGURE 3.4-4 MAJOR FAULT ZONES
IN THE SAN FRANCISCO
BAY AREA

TABLE 3.4-1. MAJOR FAULTS IN THE PROJECT AREA VICINITY

FAULT NAME	DISTANCE FROM THE PROPOSED PROJECT SITE	DIRECTION FROM THE PROPOSED PROJECT SITE
Chabot (inactive)	<0.1 miles	West
Hayward	1 mile	Southwest
Calaveras-Sunol	8 miles	East
San Andreas	20 miles	West
Source: Division of Mines and Geology, <u>Geologic Map of California</u> , 1977.		

Soils and Erosion. Millsholm silt loam on 45 to 75 percent slopes is the only soil formation mapped on the proposed project site by the Soil Conservation Service. This soil formation is well drained, has moderate permeability, very rapid runoff, low water holding capacity, has a very severe erosion hazard (USDA, 1966) and low shrink-swell potential (Nordmo, 1991).

As part of the preliminary geotechnical engineering investigation, Nordmo Associates excavated six exploratory trenches to a maximum depth of 10 feet. Soils on the site were found to consist of alluvium and colluvium. The alluvial soils were found to be clayey silt and clayey sand while the colluvial soils were found to be sandy, clayey silt. No expansive soils or shallow groundwater was encountered on the site (Nordmo Associates, 1991).

Previous Grading Activities. The site has been graded on two occasions; neither activity had adequate permits (Kreger, 1992). In the first instance, an area in the lower portion of the northern drainage swale was graded. This area is near the currently proposed project roadway exit. The second grading incident occurred in association with testing performed for the geotechnical report in 1991. This activity has left the site with a preliminarily graded dirt roadway that curves onto the site and then joins the previously graded area near the proposed project exit. This dirt roadway is in the general location of a portion of the proposed project roadway (Simmons, 1992). Both grading instances took place during rainy seasons (Kreger, 1992) and there is evidence that these incidents resulted in erosion impacts to Redwood Creek (see Section 3.5, "Hydrology/Drainage/Water Quality" and Section 3.6, "Ecology/Biology").

City of Oakland General Plan. The City of Oakland has indicated the goals of minimizing the loss of life, injuries, and damage of property of Oakland citizens resulting from natural disasters and to recognize natural environmental hazards in planning for the city's future development. The following policies from the Safety and Seismic Safety Element of the General Plan apply to the proposed project.

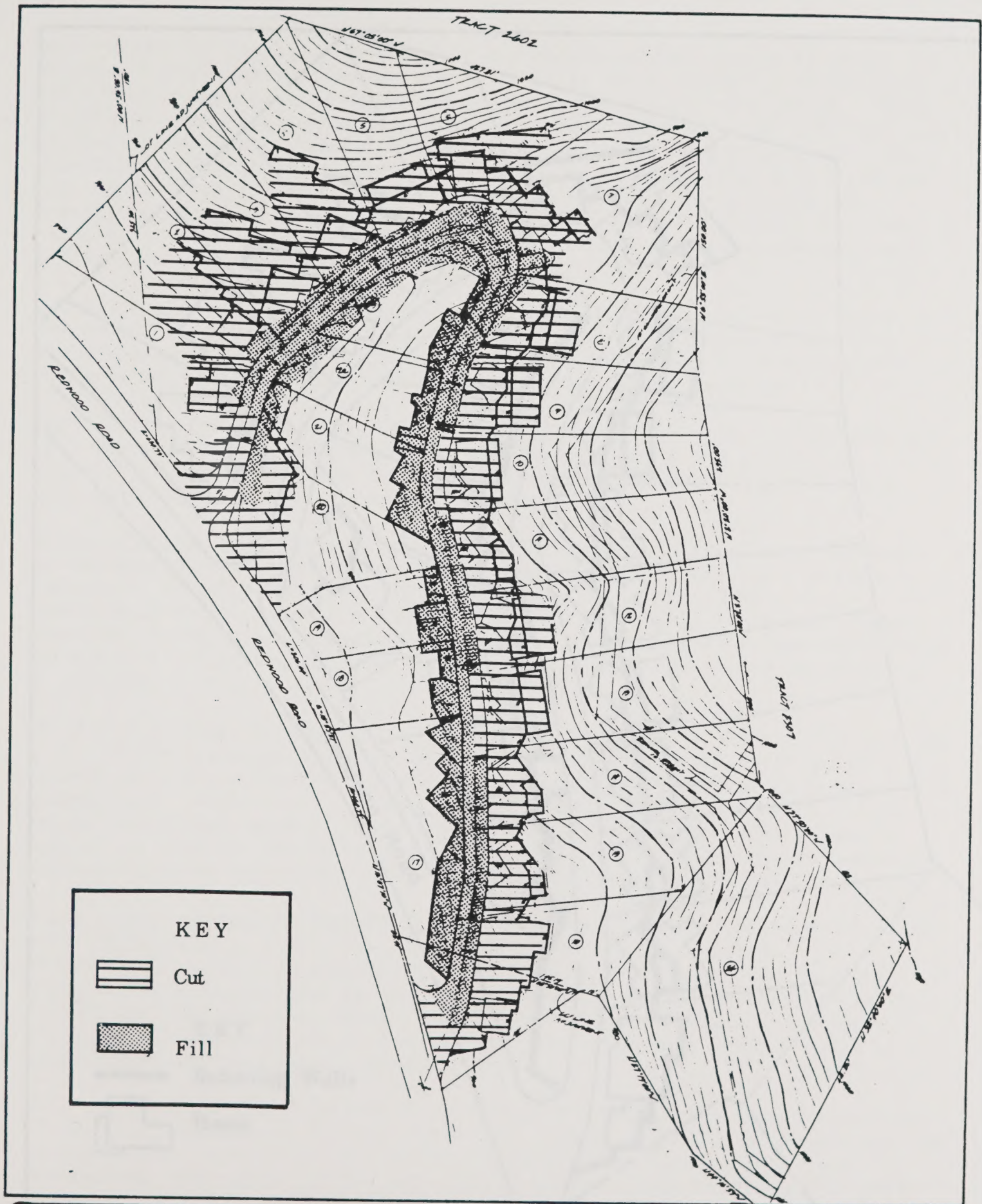
- Programs should be established and appropriate actions taken to insure a reasonable level of safety from geologic, seismic, and fire hazards within Oakland, based upon due consideration of individual property rights and consistent with investment of community resources in preventative programs.
- Except where adequate, corrective measures can feasibly be taken, construction should not occur over known faults or on land subject to landslide, erosion, or flooding. The city will make efforts to obtain more information about such hazardous areas, and will consider the imposition of additional controls on development there.
- Development involving significant alteration of natural land forms or surface conditions should generally be discouraged on slopes greater than 30 percent. Where development does occur, graded and natural slopes should be planted to hold easily eroded soil in place and cover unsightly scars.

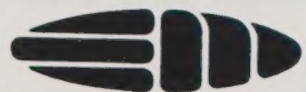
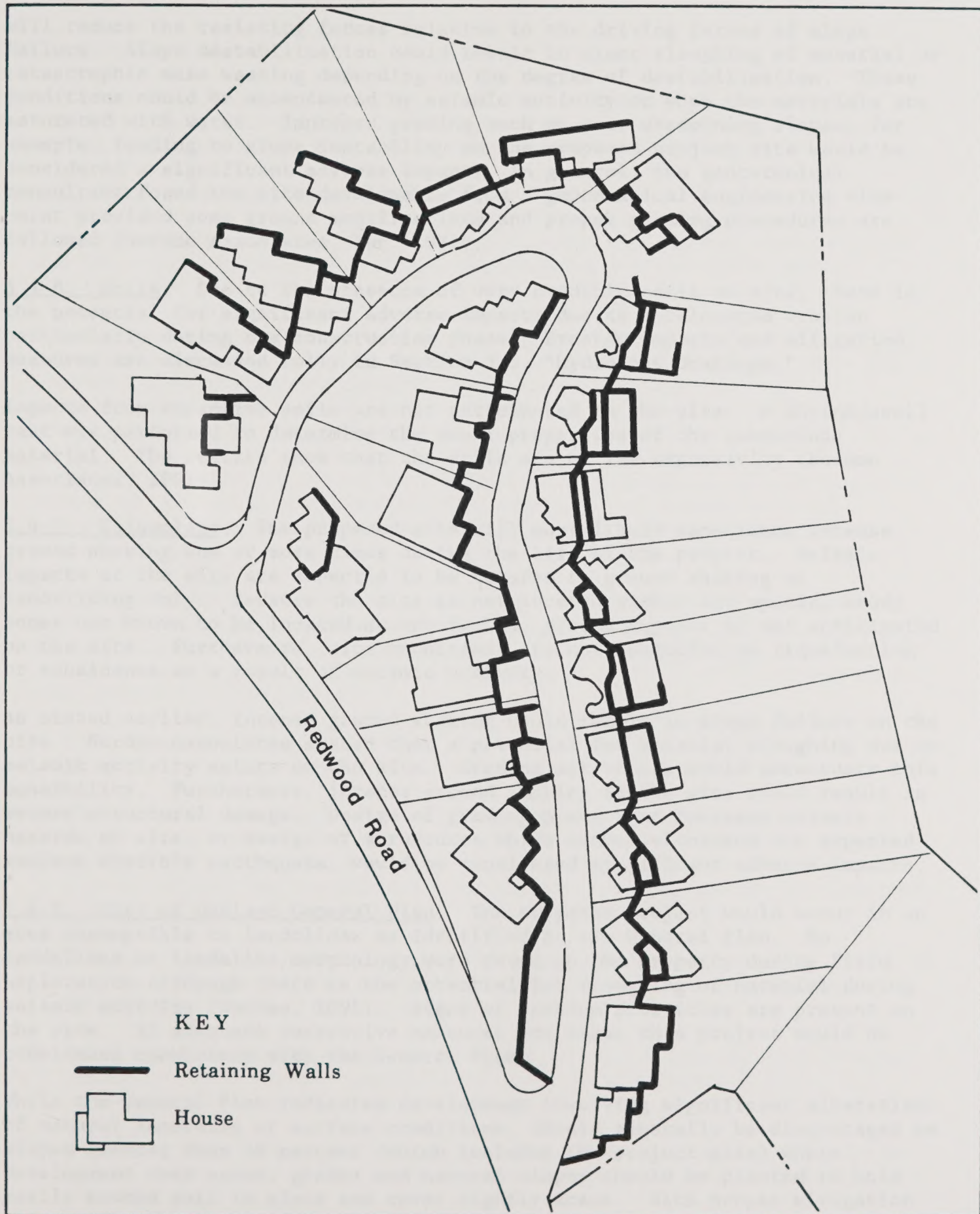
IMPACTS

Standard of Significance. A project would normally have significant geological impacts if the project would result in inducement of substantial erosion or exposure of people and structures to an unacceptable risk due to major geologic hazards. In addition, the implementation of the proposed project should be in conformance with relevant policies of the City of Oakland General Plan in order to avoid significant adverse environmental impacts. Unless otherwise indicated, impacts discussed are considered significant and adverse.

3.4-A. Topography and Slope Stability. A preliminary grading plan has been completed for the site. Preliminary estimates indicate that the proposed project will require approximately 5,000 cubic yards of fill and 9,500 cubic yards of cut, for a total of 14,500 cubic yards of material to be graded (Jones, 1992). This estimate does not take into account additional grading necessary to widen the proposed project roadway to conform to city standards from the proposed 16 feet in width to 40 feet in width which will increase grading impacts. Figure 3.4-5 indicates areas of the project site which would require cutting or filling according to the applicant's preliminary grading plan. Figure 3.4-6 shows the location of retaining walls for the proposed project. As can be seen, most of the retaining walls will be part of the proposed structures (see Section 3.2, "Visual/Aesthetics" for a discussions of the visual aspects of the retaining walls). Grading of the steep slopes could result in slope instability and erosion impacts. (Please refer to Section 3.5, "Hydrology/ Drainage" for discussion of erosion impacts.)

Existing site slopes are structurally stable. Because dip angles in the bedrock dip into the slope, except on the northern banks of the ravine, the structure of the bedrock materials resists slope failure. Although dip angles in the ravine do not dip into the slope, the angles are not expected to contribute to slope instability. The bedrock materials on site have good to fair slope stability. However, extensive grading activities on the steep slopes of the proposed project site would under certain conditions disturb the stability of the slope. Undercutting or overloading a slope during grading





earth metrics



SCALE

FIGURE 3.4-6 PROJECT RETAINING WALLS

Source: MSD Eng. and Unique Concepts

will reduce the resisting forces relative to the driving forces of slope failure. Slope destabilization could result in minor sloughing of material or catastrophic mass wasting depending on the degree of destabilization. These conditions could be accentuated by seismic activity or when the materials are saturated with water. Improper grading such as over steepening slopes, for example, leading to slope instability on the proposed project site would be considered a significant adverse impact. In general, the geotechnical consultant found the site developable from a geotechnical engineering viewpoint provided some ground modifications and proper grading procedures are followed (Nordmo Associates, Inc. 1991).

3.4-B. Soils. Due to the presence of very erodible soils on site, there is the potential for significant adverse impacts due to accelerated erosion particularly during the construction phase. Erosion impacts and mitigation measures are discussed fully in Section 3.5, "Hydrology/Drainage."

Impacts from expansive soils are not anticipated on the site. A shrink/swell test was performed to determine the swell properties of the subsurface material. The results show that the soils are of low expansivity (Nordmo Associates, 1991).

3.4-C. Seismology. The proposed site will most likely experience intense ground shaking one or more times during the life of the project. Seismic impacts at the site are expected to be related to ground shaking or landsliding only. Because the site is not located within any special study zones nor known to be located on any faults, ground rupture is not anticipated on the site. Furthermore, site conditions are not conducive to liquefaction or subsidence as a result of seismic activity.

As stated earlier, intense ground shaking could result in slope failure on the site. Nordmo Associates stated that a potential for material sloughing due to seismic activity exists on the site. Grading activities could accentuate this possibility. Furthermore, intense ground shaking at the site could result in severe structural damage. Design of grading plans that increase seismic hazards on site, or design of structures which cannot withstand the expected maximum credible earthquake, would be considered significant adverse impacts.

3.4-D. City of Oakland General Plan. The proposed project would occur in an area susceptible to landslides as identified in the General Plan. No landslides or landslide morphology were found on the property during field exploration although there is the potential for sloughing of material during seismic activity (Nordmo, 1991). Signs of erosion activities are present on the site. If adequate corrective measures are taken this project would be considered consistent with the General Plan.

While the General Plan indicates development involving significant alteration of natural landforms or surface conditions, should generally be discouraged on slopes greater than 30 percent (which includes the project site) where development does occur, graded and natural slopes should be planted to hold easily eroded soil in place and cover slightly scars. With proper mitigation this project would be considered consistent with the General Plan in this regard (see impact and mitigation measure discussions under 3.4-C).

MITIGATION MEASURES

Unless otherwise noted, implementation of the mitigation measures in this subsection, which correspond with identified significant adverse impacts in the foregoing subsection, will reduce impacts to less-than-significant levels.

3.4-A. Topography and Slope Stability

A certified Geotechnical Engineer should review the grading plan, surface and subsurface drainage plans, and foundation plans for the proposed project.

A grading plan will be required to be submitted to the Oakland Public Works Department and must meet with the city's approval. The grading plan should conform to all recommendations in the geotechnical and soils report. Issuance of grading permits will be partially dependent on whether the grading plan avoids slope stability concerns.

A Certified Geologist should be required to be present on site during all phases of project grading, excavation, and pier and foundation wall installation to ensure that recommendations in the geotechnical report are adhered to.

The proposed project should be required to follow the recommendations presented in Preliminary Report Geotechnical Engineering Investigation, Proposed 23-Lot Subdivision Redwood Road, Oakland, California prepared by Nordmo Associates Inc. Specific recommendations can be found in Appendix F and include the following:

- * Cut slopes in dense bedrock should be no steeper than 1 1/2H to 1V. Cut slopes in stiff to hard subsoil should be no steeper than 2H to 1V.
- * The proposed structures should be supported on properly designed cast-in-place reinforced concrete pier-and-grade beam foundations. Detailed foundation design parameters for individual lots will be dependent on the individual lot location and building pad configuration and elevation (cut, fill, or sloping pad).
- * Proper and adequate surface and subsurface drainage provisions should be an integral part of the proposed development, including a drainage system behind all retaining walls.
- * Soil retaining walls should be designed to resist lateral soil pressure dependent on the slope uphill of the wall (see Appendix C for recommended active pressures).
- * Retaining walls that will be part of the proposed structures should be supported on piers that should be designed to resist sliding and vertical loading.

3.4-B. Soils and Erosion

- The landscaping plan of the proposed project should be designed to reduce erosion and to cover areas of alteration of natural land forms as specified in the General Plan. Any remaining bare areas on site resulting from prior grading activities should also be revegetated and stabilized. The applicant should be required to submit the landscaping plan to the city for approval. In addition, a homeowners' association should be formed to ensure adequate maintenance of the landscaping. Please refer to Section 3.5, "Hydrology/Drainage" for complete discussion of erosion issues and mitigation measures relating to erosion impacts.

3.4-C. Seismology

- The structures of the proposed project will be required to meet the standards of the Unified Building Code (UBC). The UBC standards ensure structural designs that can withstand the maximum expected ground acceleration.

3.4-D. City of Oakland General Plan

- See mitigation under 3.4-B above.

EXISTING SETTING

Drainage. The proposed project site is located in the watershed created by Redwood Creek's western branch. The western branch of Redwood Creek drains down the eastern slope of the Oakland Hills into Upper San Leandro Reservoir. The Upper San Leandro Reservoir supplies drinking water to the City of Oakland and other parts of the East Bay. The East Bay Municipal Utility District drinking water intake tower, that channels water to the filter plant, is in the arm of the reservoir that receives water from Redwood Creek (Owen, 1992). The upper portion of the creek, near the site, is an intermittent stream, but it contains pools of water and has sub-surface flow year round. The lower portion of the creek has perennial flow.

All surface flow from the site currently enters Redwood Creek. There is an intermittent drainage course which crosses the northern half of the proposed project site (see Figure 3.5-1). The topography in the central and southern portions of the site indicates that runoff from the remaining areas is concentrated into two ephemeral drainages. Runoff is directed by these drainages straight down the slope of the site to the edge of Redwood Road. A culvert collects the runoff and carries it under the road to Redwood Creek. The runoff then flows north in Redwood Creek which parallels Redwood Road. Because the site is on steep slopes at the high end of the watershed, no flood hazards exist on site (FEMA, 1982).

The proposed project site is currently undeveloped open space in a largely undeveloped watershed. The soils on site have a severe erosion hazard according to the Soil Conservation Service (see Section 3.4, "Geology"). Previous grading on portions of the site, which included construction of a dirt road, shows evidence of erosion. Hay bails and erosion control fences have been placed on the site to control some of the existing erosion. Siltation of Redwood Creek was noted immediately downstream of the site. It is likely that some of this siltation resulted from erosion on the site.

Water Quality. To the northeast and east of the project site are residential uses; a horse ranch is adjacent to the site on its southern border (see Section 3.1, "Land Use and Planning"). All other neighboring land uses are open space areas of the regional parkland system. Runoff from portions of the residential land uses may drain onto the proposed project site. It is likely that there are some pollutants in the runoff generated by the residential areas. Potential pollutants found in residential runoff include fertilizers, pesticides, oil and grease, and other chemicals found in household products.

There is data available that indicates that the existing Redwood Creek water quality during storm events may exceed levels predicted to be toxic to aquatic life for four metals regulated by the Regional Water Quality Control Board, chromium, copper, lead, and zinc. However, this data is not considered conclusive nor is it a comprehensive estimate of water quality conditions in the creek, as a whole (East Bay Municipal Utility District, 1991).

Redwood Creek currently supports a unique population of rainbow trout. For this reason Redwood Creek is very sensitive to water pollution. Please refer

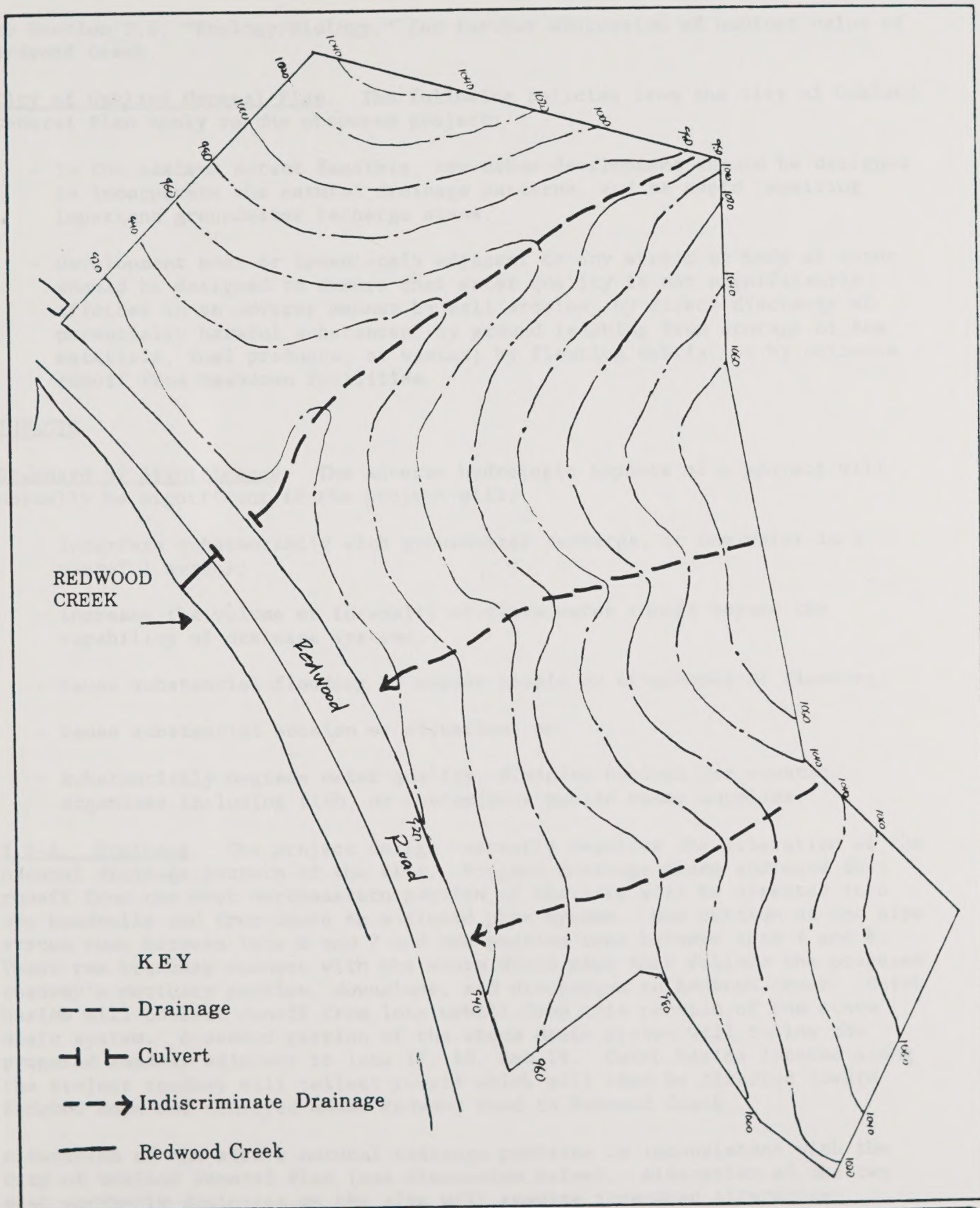


FIGURE 3.5-1 PROJECT SITE DRAINAGE AND TOPOGRAPHY

Source: MSD Engineering (Base Map)

to Section 3.6, "Ecology/Biology," for further discussion of habitat value of Redwood Creek.

City of Oakland General Plan. The following policies from the City of Oakland General Plan apply to the proposed project:

- To the maximum extent feasible, new urban development should be designed to incorporate the natural drainage patterns, and to avoid impairing important groundwater recharge areas.
- Development over or immediately adjacent to any stream or body of water should be designed to ensure that water quality is not significantly affected in an adverse manner by soil erosion; by direct discharge of potentially harmful substances; by ground leaching from storage of raw materials, fuel products, or wastes; by floating debris; or by nuisance runoff from washdown facilities.

IMPACTS

Standard of Significance. The adverse hydrologic impacts of a project will normally be significant if the project will:

- interfere substantially with groundwater recharge, or use water in a wasteful manner;
- increase the volume or intensity of storm water runoff beyond the capability of drainage systems;
- cause substantial flooding or expose people or structures to flooding;
- cause substantial erosion or siltation; or
- substantially degrade water quality, diminish habitat for aquatic organisms including fish, or contaminate public water supplies.

3.5-A. Drainage. The project design currently requires the alteration of the natural drainage pattern of the site. Project drainage plans indicate that runoff from the most northeastern portion of the site will be directed into two headwalls and from there to a closed pipe system. One portion of the pipe system runs between lots 6 and 7 and one portion runs between lots 7 and 8. These two branches connect with the storm drain pipe that follows the proposed roadway's northern portion, downslope, and discharges to Redwood Creek. Catch basins will collect runoff from lots uphill from this portion of the storm drain system. A second portion of the storm drain system will follow the proposed roadway adjacent to lots 17, 18, and 19. Catch basins located along the project roadway will collect runoff which will then be directed toward Redwood Road and conveyed under Redwood Road to Redwood Creek.

Alteration of the site's natural drainage patterns is inconsistent with the City of Oakland General Plan (see discussion below). Alteration of the two most northerly drainages on the site will require Streambed Alteration Agreements from the California Department of Fish and Game (CDFG). The CDFG strongly recommends that the intermittent drainage on site (most northerly

drainage) be preserved and that the second ephemeral drainage also be preserved if at all possible. If this is not possible mitigation would be required that results in no net loss of wetland or habitat value.

The placement of fill in either of the two northerly drainages requires authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (High, 1992) (see full discussion in Section 3.6, "Ecology/Biology").

Construction of residences, the proposed project roadway, and other paved surfaces on site will increase the amount of impervious surfaces on the project site. The project applicant will be required to have a civil engineer compute the peak rate of runoff in order to correctly size the storm drain system.

Increasing the amount of impermeable surfaces on site will reduce the amount of water seeping into the ground during wet weather. This would reduce groundwater recharge on the site. However, existing groundwater recharge on the site is limited due to the steep slopes and small size of the site. Furthermore, the site is located within the Upper San Leandro Reservoir watershed, so runoff from the site would not be lost from local water supplies. Impacts to groundwater recharge are not anticipated to be significant; however, due to increases in urban runoff being discharged into Redwood Creek, potential water quality impacts are critical (see discussion below) both for sensitive aquatic species (see Section 3.6, "Ecology/Biology") and because Redwood Creek is a drinking water source.

Increased runoff could significantly increase erosion in the long-term. As runoff volumes increase so will runoff velocities thereby increasing the amount of suspended solids that can be carried in the runoff. This situation will allow for greater erosion on the site. Erosion could also be increased by changes in the existing drainage patterns on the site. Uncontrolled runoff that is diverted from its natural drainage course may create new drainage courses by eroding soils. A project design that does not adequately control potential erosion would be considered a significant adverse impact.

3.5-B. Sedimentation. Construction and grading activities will require leaving bare soils on site. Because of the steep slopes and the severe erosion hazard of the soils, exposed soils could be significantly eroded. Erosion on the proposed project site would not only remove soil from the site but could cause significant siltation downstream of the site. This would have significant impacts to habitats in Redwood Creek. Please refer to Section 3.6, "Ecology/Biology," for discussion of impacts to stream habitats. Construction activities that result in erosion would be considered a significant adverse impact.

The City of Oakland uses guidelines for erosion control methods developed by the Association of Bay Area Governments (ABAG) to regulate construction activities. Implementation of proper erosion control methods during construction of the proposed project will be monitored by the Oakland Engineering Department and will be a condition of building permits (Grubstick, 1991).

3.5-C. Water Quality. In addition to erosion, the proposed project may introduce other pollutants into the drainage system and Redwood Creek. The diversion of drainage out of its natural drainage courses and/or the collection of flows from impervious surfaces, has been shown by several studies to increase the levels of some pollutants, most notably metals, that can be toxic to fish and other aquatic life. Some of these metals, lead for example, may come primarily from air deposition. Contact with soils or organic materials greatly reduces the level of these pollutants that remain in the water, thus an increase in impervious materials increases the level of pollutants in surface runoff (Alameda County Urban Runoff Clean Water Program, 1991).

Recent studies of non-point source discharges and storm water runoff in portions of Alameda County have also indicated that storm water runoff from urban development, including primarily single-family residential development, frequently exceeds water quality objectives of the State Water Resources Control Board for copper, lead, and zinc. In contrast, runoff from open space areas have been found to have significantly better water quality. Toxicity testing results indicate that dry-weather flows (those flows that occur without storm water runoff) and storm water flows from open space/undeveloped areas tend not to be toxic to aquatic life. However, storm water runoff from urbanized areas tends to be toxic to organisms (Woodward-Clyde Consultants, 1991).

The proposed project's drainage system is expected to allow its storm drainage system to empty directly into Redwood Creek; therefore, any pollutants entering the drainage system would end up in Redwood Creek and could adversely impact sensitive aquatic species inhabiting Redwood Creek including steelhead rainbow trout. In addition, there is a potential for occasional spills or other significant releases of pollutants into the drainage system. Examples of potential releases include emptying used motor oil into a street gutter, car washing with soap in driveways, or a leak in the sewer system. Without measures to contain pollutants on site, cumulative minor releases and releases that are concentrated enough or large enough could impact Redwood Creek.

In addition, more intense human activity such as that proposed for the site, leads to greater probability of catastrophic incidents occurring in the watershed. Over time, these catastrophic incidents and urban pollutants attributable to the project will combine to have a long-term impact on water quality which may result in loss of important aquatic species. Reduction of the water quality in Redwood Creek would be considered a significant adverse impact.

3.5-D. The Federal Clean Water Act (Section 402(p)) requires dischargers of storm water associated with industrial activity and with construction activity on five acres or more to be regulated by the National Pollutant Discharge Elimination System (NPDES) Permits. The site is greater than five acres, therefore, the project applicant would be required to obtain a construction storm water permit governing all construction activity, including clearing, grading, and excavation. The permit will require dischargers associated with construction activity to eliminate non-storm water discharges to storm water systems and other waters of the nation; develop and implement a storm water pollution prevention plan including after project buildout impacts; and

perform monitoring of discharges to storm water systems (State Water Resources Control Board, 1992). The Regional Water Quality Control Board (Region 2) will make the determination as to whether a general permit or individual permit will be required for this project (Bowyer, 1992).

3.5-E. City of Oakland General Plan. The General Plan states that "to the maximum extent feasible, new urban development should be designed to incorporate the natural drainage pattern..." The proposed project would significantly alter the current drainage patterns which is inconsistent with the General Plan.

The policy requiring development immediately adjacent to any stream to be designed to ensure that water quality is not significantly affected in an adverse manner would apply to the proposed project. Although Redwood Road separates Redwood Creek from the project site, the two are closely linked hydrologically. The northern intermittent stream empties into Redwood Creek via a 30-inch culvert that passes underneath Redwood Road. The two ephemeral drainages on the property drain over the roadway into Redwood Creek. In addition, the site's northwestern tip drains directly into the creek after it crosses underneath Redwood Road just north of the site. The site drainage plan also indicates project runoff will be discharged directly into Redwood Creek. As discussed above, both erosion and pollutant releases have the potential to significantly adversely affect water quality in Redwood Creek.

MITIGATION MEASURES

Unless otherwise noted, implementation of the mitigation measures in this subsection, which correspond with identified significant adverse impacts in the foregoing subsection, will reduce impacts to less-than-significant levels.

3.5-A. Drainage. The following mitigation measure should reduce the impacts of increased runoff due to the increase in impervious surfaces on the project site:

- The project applicant will be required to have a civil engineer compute the peak rate of runoff in order to correctly size the storm drain system to meet city standards. The storm drain system would require the city's review and approval.

The following mitigation measures concern regulatory requirements regarding the filling or other alterations of the on-site drainages:

- Alteration of the two most northern drainages on the site will require a Streambed Alteration Agreement from the California Department of Fish and Game (CDFG). CDFG strongly recommends that the most northern drainage be preserved and that the second drainage also be preserved if at all possible. If this is not possible, mitigation would be required that results in no net loss of wetlands or habitat value.
- Placing fill in the two most northern drainages will require authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. The applicant should consult with the USACE regarding the proper permitting required.

3.5-B. Sedimentation. The following mitigation measures should reduce the impacts of sedimentation from construction and grading activities:

- The site erosion control plan should be submitted to the City of Oakland and the East Bay Regional Park District for approval prior to commencement of any grading on the site. This plan should incorporate strict erosion control measures including those outlined below, in order to adequately control the severe erosion hazard from the Millsholm soils on the site's steep slopes. The erosion control plan should be designed pursuant to the guidelines of the Association of Bay Area Governments.
- Grading and excavation activities must be performed during the dry season only and should be prohibited between October and May.
- Bare areas should be mulched and planted with vegetation before the wet season begins.
- Strippings of vegetation and organic top soil during construction should be removed from the site or placed such that they will not create debris flow or erosion hazard.
- Temporary devices such as diversion dikes, hay bales, silt fences, and plastic sheets should be used to control runoff on exposed areas.
- Before grading and construction commences, sediment traps should be installed on the site at all points of entry into Redwood Creek. Sediment traps should be designed to contain any and all erosion that occurs on site before it enters the creek.

3.5-C. Water Quality

- A terraced cascade of vegetated retention ponds or other treatment technology to filter pollutants from stormwater should be incorporated into the project's storm water system design. The ponds would allow site runoff to percolate into the soil and most metals and other organic constituents would be removed. The retention ponds should be designed to retain the amount of runoff expected from a 10-year storm event. The Department of Fish and Game, the Regional Water Quality Control Board (Region 2), and the City of Oakland should approve the design of the ponds or other technology and the plan for ongoing maintenance. A provision for responsibility for implementation of the maintenance plan should be included in the CC&Rs for the project.
- All storm drains constructed as part of the proposed project should be labeled, either by stamping the concrete curb or by a posted sign, to indicate that the drain flows into Redwood Creek which supports sensitive wildlife species, including steelhead rainbow trout. The sign should indicate, if possible, that only clean storm water should enter the drain and that disposing of, or allowing runoff to carry, silt, household hazardous chemicals such as paint, or any oils or soap, etc. into the drains is prohibited.

- A homeowner's association should be formed to educate residents about the sensitivity of the creek and to encourage minimizing the use of pollutants, especially herbicides which would harm the vegetated ponds and the creek.
- The project should be designed to provide outdoor roofed carports that drain to the sanitary sewer rather than the storm drain system. These carports should be equipped with hoses and labeled as the only place on site where cars are to be washed if soap or other chemicals are to be used.

The following mitigation measures should reduce the impacts of long-term erosion impacts:

- The storm drainage system and landscaping of the proposed project should be designed to reduce erosion by limiting bare areas and controlling runoff on exposed soil. All runoff should be controlled and directed away from exposed soils and into existing natural drainages or properly engineered drainages.
- Eave gutters and downspouts should be installed to collect roof water runoff with outlet pipes from the downspouts directed to appropriate outlet locations.
- Energy dissipators should be placed at storm drain outfalls to minimize erosion and scouring. Riprap should be provided at all intake structures.
- Any paved surfaces overhanging unpaved slopes should be engineered to prevent storm water from flowing off and creating new drainageways. All sheet flow should be directed to the storm drain system.
- Permanent use of sediment traps should be employed to contain sediments originating on the developed site before they enter Redwood Creek. The plan for the design and maintenance of these sediments traps should be included in the erosion control plan to be submitted to the city prior to commencement of construction activities on the site.

3.5-D. Federal Clean Water Act

- The project applicant will be required to obtain a construction storm water permit under the National Pollutant Discharge Elimination System (NPDES) permitting program. The Regional Water Quality Control Board (Region 2) will make the determination as to whether a general permit or individual permit will be required. Permit conditions should include requirements for ongoing maintenance of the stormwater infrastructure and for monitoring of the water quality of the stormwater runoff.
- While mitigation measures suggested above can reduce water quality impacts to Redwood Creek from activities on the project site, they cannot reduce the impact of potential catastrophic events associated with more intense human activity in the creek vicinity (these events could include for example, increased car accidents, dumping into the creek, and other such events). These catastrophic events are expected to cumulatively have a

significant adverse impact on the water quality of Redwood Creek that is unmitigable. This would be a significant unavoidable impact of implementation of the proposed project.

3.5-E. City of Oakland General Plan

- Project inconsistency with the General Plan policy that "to the maximum extent feasible, new urban developments should be designed to incorporate the natural drainage plan" cannot be mitigated without site plan modification.

EXISTING SETTING

Vegetation. The steep hill of the project site supports a healthy mosaic of grassland, scrub, woodland, and forest, composed mostly of native species. Non-native plant communities on the site are limited to the area near Redwood Road, where disturbance has allowed non-native species to displace the native species over time. Distinct plant communities found on the project site include coast live oak woodland, coastal scrub, non-native grassland, and eucalyptus woodland. Redwood trees are also found on the site (Jones, 1992); these trees are part of a dense redwood grove that occurs just outside of the site boundary to the northeast and extends onto the site for only a short distance (see Figure 3.6-1). The eucalyptus and grassland communities are dominated by introduced species, and the ranges of these communities on the site are concentrated in the westernmost portion of the site proximate to Redwood Road (see Figure 3.6-1). Grassland also dominates the steepest areas on the site, along the eastern perimeter. The west branch of Redwood Creek, which supports a sensitive population of native rainbow trout, is located immediately across Redwood Road from the site. This creek crosses underneath Redwood Road just north of the site, so that overland drainage from the site's northwestern tip drains directly into the creek.

The steep project site is a narrow extension of woodland/grassland habitat that is connected to the heavily wooded and mostly undeveloped Redwood Canyon, which stretches for miles north and east of the project site providing a regional open space network. The intermittent stream on the property's north end is likely to contain water only during rainy seasons, and empties into the west branch of Redwood Creek via a 30-inch culvert that passes underneath Redwood Road. The other two ephemeral drainages on the property drain over the roadway into Redwood Creek. Woodland vegetation is relatively more dense near the drainages, and some plant species near the drainages are characteristic of riparian communities.

The steep hillsides of the site contain mostly grassland or coastal scrub vegetation; woodland vegetation is limited to drainage swales or near Redwood Road, at the bottom of the canyon. In the project vicinity, residential development has occurred on the crest of these hillsides, but the steep, wooded, and grassy slopes in between the Balmoral development and Redwood Road have been left in a mostly natural state. The woodland and grassland on these slopes is contiguous with the open space areas of the East Bay Regional Park District.

The dry slopes of the project site support vegetation adapted to the natural and frequent occurrence of fires. Dead branches, twigs, and other fire "fuel" have built up over the years in the Oakland Hills. This condition has been exacerbated by the drought and the killing frost of the winter of 1990-1991. The large quantities of dry and dead vegetation contributed to the severity of the October 1991 firestorm in the Oakland Hills. Woodland and grassland areas on the site contain a substantial volume of dead plant matter. The site is part of the area east of the MacArthur and Warren Freeways, which is considered to be a fire hazardous area by the City of Oakland (Oakland General Plan, 1976). As part of the urban-wildland interface, the site would probably be subject to fuel management programs instituted to lessen the hazard of fires in the future.

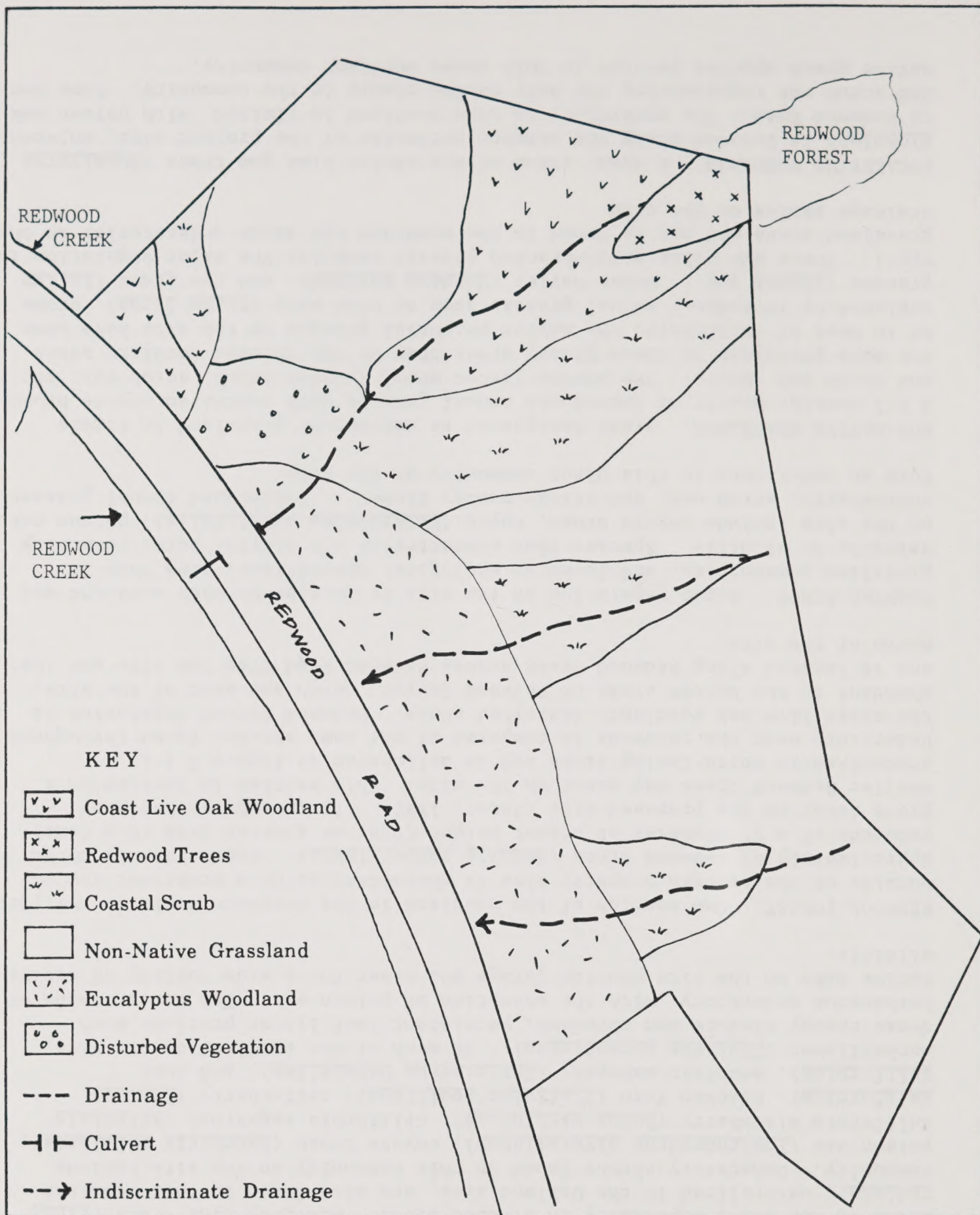


FIGURE 3.6-1 GENERALIZED VEGETATION AND DRAINAGE MAP

COAST LIVE OAK WOODLAND. The native woodland vegetation extant on the site is located mostly in the swales of the proposed project site. The trees in this community consist mostly of coast live oak (Quercus agrifolia) and California bay laurel (Umbellularia californica), although some scrub oak (Q. dumosa) is found on the site, especially in steeper areas. Monterey pine trees (Pinus radiata), naturalized in the Oakland area, are also found in this woodland community. Understory shrubs found in this community on the site include poison oak (Toxicodendron diversilobum), coyote brush (Baccharis pilularis), California blackberry (Rubus vitifolius), California sagebrush (Artemisia californica), bracken fern (Pteridium aquilinum), coffeeberry (Rhamnus californica), mountain mahogany (Cercocarpus betuloides), and bush monkeyflower (Diplacus aurantiacus). In much of the woodland on the site, dense canopy closure and abundant, persistent leaf litter preclude much herbaceous understory, with the exception of poison oak. The dense stands of native oaks on the site provide forage and cover for a wide variety of native wildlife.

REDWOOD FOREST. One section of the woodland in the northern swale on and just outside of the eastern property line is characterized by a prominent row of approximately 43 redwood trees (Sequoia sempervirens). Approximately three redwoods of a 9" diameter at breast height (DBH) or greater from this dense grove occur on the proposed site (Jones, 1992). It is unknown how many smaller Redwood trees may occur on the site. This section is located on a predominantly north-facing slope and is delineated in Figure 3.6-1. Understory near the redwoods is composed of the same species found throughout the coast live oak woodland, described above. Redwood forest vegetation is abundant in the bottom areas of Redwood Canyon, north and east of the site, and is located along Redwood Creek across Redwood Road from the site and just north of the site.

COASTAL SCRUB. Scrub vegetation on the site is located between woodland and grassland communities, and forms an ecological transitional zone that is valuable to wildlife. Species that characterize the coastal scrub community on the site include coyote brush, toyon (Heteromeles arbutifolia), poison oak, coffeeberry, scrub oak, and sticky monkey flower. Introduced annual grasses form an understory in this plant community on the site.

NON-NATIVE GRASSLAND. Areas designated as non-native grassland in Figure 3.6-1 consist mostly of introduced annual grasses with scattered coyote brush and scrub oak shrubs. The shrubs listed above (coyote brush, scrub oak, etc.) are more prevalent in these grassy areas than in the thicker woodland zones. As in most of California, the native perennial grasses on the site have been replaced by introduced annual grasses such as wild oats (Avena fatua), brome grasses (Bromus spp.), mouse barley (Hordeum murinum), and rye grass (Lolium spp.). These and other mediterranean grasses comprise the major vegetation in grassland areas and may be found in the woodland and scrub understories in the drainage swales on the site.

EUCALYPTUS WOODLAND. A dense stand of non-native blue gum trees (Eucalyptus globulus) is located along the western perimeter of the project site, adjacent to Redwood Road. The understory in this woodland is limited, with poison oak and scrub oak representing the only native plants in the community. Some non-native grass species persist in this dense woodland community.

RIPARIAN WOODLAND. A perennial drainage, Redwood Creek, parallels Redwood Road, located across the road from the project site (see Figure 3.6-1). Also, a riparian woodland community is located adjacent to the site's northwestern corner, where the west branch of Redwood Creek crosses underneath Redwood Road. Although not on the site, the sensitive riparian ecosystem is discussed because of its close proximity. Activities proposed for the site have the potential of adversely affecting ecosystems located off-site. Vegetation along this drainage course consists of thick woodland vegetation which includes redwoods, oaks, bay laurels, and willows (*Salix* spp.), as well as thick, impenetrable California blackberry briars. The drainage contained a small amount of water during the site inspection conducted in June 1991. This habitat is considered to be highly valuable to fish and wildlife for spawning, watering, migration, and other uses.

Riparian ecosystems are important, productive habitats. Root systems of trees of riparian woodland ecosystems are important in erosion control and their dense canopy provides food and shelter for a variety of birds and small mammals, giving the community high habitat value. The lush cover afforded by this habitat also provides wildlife with a suitable environment for breeding. Native steelhead trout are known to spawn in the riparian habitat as close as 300 feet downstream of the site during wetter years (see "sensitive species" subsection below for a discussion of this species). Near the project site, the wildlife value of this habitat is degraded by the proximity of Redwood Road and disturbances associated with the roadway.

Fish and Wildlife. The extensive natural vegetation on the project site provides local wildlife with valuable forage and cover. The habitat value of the dense woodlands on the site is enhanced by the intermittent swale on the site and the nearby Redwood Creek, which provide preferred breeding, nesting, feeding, and watering habitat for the local wildlife. Marginal areas between grassland, scrub, and woodland, known as "ecotones," are valuable areas to wildlife because of the greater diversity of plant species and available habitat types in these areas. For instance, raptors prefer such ecotonal areas, as woodland provides nesting and perching habitat, and grasslands support rodent prey populations. The patchy vegetation mosaic on the site, evident in Figure 3.6-1, includes many linear feet of ecotones on the site. The west branch of Redwood Creek provides spawning habitat for the native steelhead trout.

Native wildlife use the site regularly, because the site is contiguous with the relatively large open space network that includes Redwood Regional Park and Joaquin Miller Park. The site is a "finger" of habitat extending from open space areas surrounding Redwood Canyon toward the developed area around the intersection of Redwood Road and Skyline Boulevard. Local corridors of dense native woodland on the site are considered valuable to wildlife for movement and forage, but the site presently does not provide any crucial link between important habitats.

Oak woodland provides valuable habitat for a number of wildlife species. Since approximately 20 million acres or 20 percent of California is vegetated with some combination of 6 species of oaks, it is not surprising that a major proportion of the state's wildlife utilizes oaks for food and cover (Barrett, 1979). Approximately 110 species of birds and 60 species of mammals in California are known to use oaks in some way, and many other species need further study to determine their dependence upon or independence from the

useful oaks. Birds use the oaks for foraging, nesting, or perching, and many regularly eat acorns. In addition to forage, mammals make use of oaks for thermal or escape cover. For instance, the raccoon (Procyon lotor) uses hollow oaks as den sites. Of course, in most cases, the animals are not restricted to oaks and could substitute similar vegetation, but in many cases where oaks are being eliminated, no satisfactory substitutes are available (Barrett, 1979).

Oak woodlands in California support a great diversity of avian species. Various finches, thrushes, and sparrows were noted during a site visit. Raptor species were active on the site during the site visit as well. The mosaic of woodland, scrub, and grassland on the site is highly valuable to birds of prey, as woodland and scrub provide cover and roosting sites while adjacent grassland areas are valuable hunting grounds. Other species of birds expected to flourish in oak woodland habitats, such as those existing on site, in the Oakland area include but are not limited to the following: red-shouldered hawk, California quail, band-tailed pigeon, western screech owl, great horned owl, northern pygmy owl, common flicker, hairy woodpecker, acorn woodpecker, downy woodpecker, western flycatcher, western wood pewee, Steller's and scrub jay, chestnut-backed chickadee, plain titmouse, wrentit, common bushtit, brown creeper, white-breasted nuthatch, Bewick's wren, house wren, winter wren, American robin, hermit thrush, ruby-crowned kinglet, starling, solitary vireo, warbling vireo, Hutton's vireo, orange-crowned warbler, Wilson's warbler, northern oriole, black-headed grosbeak, purple finch, pine siskin, brown towhee, rufous-sided towhee, lesser goldfinch, white-crowned and golden-crowned sparrow, and song sparrow (Golden Gate Audubon Society, 1982; Peterson, 1961).

A number of different mammals may be found among the oaks as well. Three mule deer individuals were noted in woodland areas on the project site during the site visit. Paths worn through the dense woodlands were evidence of their frequent use of these areas. Large mammals such as the mule deer require larger expanses of natural vegetation for habitat, which the plant communities of the project site and connected areas presently provide. Other mammals expected to utilize the oak woodland community on the subject site include the following: opossum, California mole, little brown myotis, California myotis, raccoon, long-tailed weasel, spotted skunk, striped skunk, coyote, brush rabbit, desert cottontail, bobcat, Beechy ground squirrel, western gray squirrel, valley pocket gopher, Heerman kangaroo rat, western harvest mouse, deer mouse, brush mouse, dusky-footed woodrat, California vole, gray fox, and mule deer (Burt and Grossenheider, 1976).

Several reptiles and amphibians which have adapted to the oak woodland habitat may also be found on the subject site. Reptiles expected to utilize oak woodland habitat in the Oakland area include the northwestern fence lizard, western skink, alligator lizard (northern and southern), Pacific gopher snake, common kingsnake, western yellow-bellied racer, sharp-tailed snake, terrestrial garter snake, common garter snake, and the Pacific ring-necked snake. Amphibians expected to use wetter habitats on and near the site include the California newt, ensatina, arboreal salamander, California slender salamander, western toad, and Pacific treefrog (Stebbins, 1966).

Scrub areas on the site are used by the above listed species as well. Relative to woodland, these areas provide less forage and nesting habitat, due to relatively less vertical depth, but the native scrub plants are

nevertheless valuable to wildlife. Birds such as Anna's hummingbird, bushtit, California thrasher, and brown towhee even prefer the scrub to the more dense woodland. Eucalyptus woodland also provides nesting and roosting habitat for native wildlife such as great horned owl, but the habitat value of this ecosystem on the site is relatively low, due to proximity to Redwood Road and the relative paucity of native plant food sources.

Grasslands support a variety of wildlife as well. Rodents such as pocket gopher, meadow vole, western mole, and western harvest mouse, and grazers such as black-tailed jackrabbit and mule deer may be found in these habitats. Snakes and carnivorous mammals prey on these herbivores, examples of which include common king snake, gopher snake, yellow-bellied racer, and the coyote. Raptors such as red-tailed and red-shouldered hawks would be expected to prey on small rodents in the grasslands, while nesting and perching in adjacent woodland habitats. Birds indigenous to the grassland habitats include Brewer's blackbird, mourning dove, American robin, and California quail. Salamanders, fence lizards, and alligator lizards are expected to thrive in these habitats as well. All grasslands on the site have the capacity to support this range of wildlife.

Sensitive Species. Rare, endangered, or threatened species are protected by the Federal Endangered Species Act of 1973 (as updated 50C7R 17.11 and 17.12, January, 1982), the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970 (California Administrative Code, Title 14, Section 670.2 and 670.51). CEQA (January, 1984) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Section 15380 of that act.

The California Natural Diversity Database (CNDDB), administered by the Natural Heritage Division of the California Department of Fish and Game (CDFG), was consulted for records of occurrences of sensitive animals, plants, and natural communities that have been reported in the Oakland Hills. The East Bay Regional Parks District was also consulted regarding sensitive biological resources of Redwood Regional Park and its environs, which includes the project site. The consultations revealed no reportages of any special organisms or natural communities on the hillsides on which the project site lies. However, because a lack of local reportages does not constitute a negative result, all reports of sightings of sensitive species within a two-mile radius of the project site are considered below.

NATIVE STEELHEAD RAINBOW TROUT. The west branch of Redwood Creek is known spawning habitat for a historically and scientifically significant population of native steelhead rainbow trout (Onchorhynchus mykiss). This trout population was effectively isolated from the ocean in 1875, with the construction of Chabot Dam on San Leandro Creek, downstream of its confluence with Redwood Creek. The upstream construction of Upper San Leandro (USL) Dam in 1926 further isolated these trout on protected watershed lands not open to the general public. Examination of planting records has not provided any evidence that USL Reservoir has ever been planted with hatchery rainbow trout. A genetic study of steelhead rainbow trout in Redwood Creek, conducted in 1990, revealed that their genetic profile strongly supports the contention that they are descendants of native California steelhead (Gall, et.al., 1990). The coastal rainbow trout was originally confined to Pacific coast streams and some interior basins from Alaska to Mexico. Due to the widespread hatchery plantings of hybrid rainbow trout that occur worldwide, the occurrence of a

genetically pure strain of native rainbow trout is a unique and valuable resource, becoming increasingly rare from year to year (EBRPD, 1991). Of all the adult steelhead that reside in the USL Reservoir, approximately 80 percent spawn in San Leandro and Redwood Creeks (Alexander, 1991). These facts emphasize the scientific significance of the west branch of Redwood Creek, and the importance of maintaining the current quality of habitat.

The early stages of the life cycle of the native rainbow trout is dependent on the small creeks of the San Leandro watershed, including the west branch of Redwood Creek. Adult trout reside in the deeper reaches of the USL Reservoir during most of the year. When creeks become swollen with runoff between January and April, adults migrate up the creeks at night to find suitable spawning habitat. They form nests (redds) in pockets of loose gravel where circulating water washes away silt and provides developing eggs with adequate oxygen. Approximately two out of every three eggs hatch within a few weeks of spawning. Of every 1,000 eggs laid by spawning trout, fewer than 100 reach maturity. Young trout live in the creeks for one to two years, growing three to four inches per year, before migrating to the deep water habitat of the reservoir (EBRPD, 1991). On the west branch of Redwood Creek, spawning habitat occurs all along the canyon. In a normal year (with normal precipitation patterns from November to April), spawning occurs up to Station #1, at the entrance to the EBRPD fisheries office, approximately 1,500 feet north of the site. In extraordinarily wet years, such as 1983 and 1986, rainbow trout spawning has occurred on the west branch of Redwood Creek as close as 300 feet north of the site (Alexander, 1991).

The native steelhead rainbow trout population is also significant from a historical standpoint. The coastal rainbow trout, now established in temperate zones throughout the world, was first described based on specimens collected from the San Leandro Creek watershed, which includes the project site. In 1855, Dr. G.W. Gibbons, founder of the California Academy of Sciences, collected three specimens of coastal rainbow trout from San Leandro Creek, downstream of the project site, and described them as a distinct species, Salmo iridea. The fish population has State Landmark Status, and is registered as California Registered Historic Landmark 970 (EBRPD, 1991). Therefore, the relatively pure strain of native steelhead trout that reside in Redwood Creek are a preserved genetic stock of the population that was originally named "rainbow trout." The fish population's unique combination of being both historically and scientifically valuable heightens the sensitivity of the spawning gravels of Redwood Creek and mandates their protection from siltation or urban pollution.

ALAMEDA WHIPSNAKE. The Alameda whipsnake (Masticophis lateralis euryxanthus) is considered to be one of the rarest snakes of the East Bay region, and it is a state-listed threatened species and a Federal Candidate 2 species for endangered listing. Major threats to Alameda whipsnake habitat include urban development and water impoundment. According to the most recent information, the last large populations of this snake are probably restricted to large expanses of open space, most of which are managed by the EBRPD and the EBMUD (CDFG, 1987). The limited distribution information that is available indicates that this sensitive species does not coexist with urban development. Fuel modification on south-facing slopes is another possible threat. In addition, there is some evidence that biocides have adverse effects on oviporous reptiles such as the whipsnake (CDFG, 1987).

Several habitat requirements for the Alameda whipsnake are presently known. This species is characteristically associated with northern coastal scrub communities. The broken canopy of the scrub allows the snake to bask in the sun yet remain somewhat protected from predators. Closed canopy areas do not allow the snake access to the sun. Specific habitat requirements for the Alameda whipsnake include west-to-south-to-east facing slopes; individuals are not found on cooler, north-facing slopes. In addition the presence of abundant prey indicates good habitat. The western fence lizard is common source of food for the whipsnake. In addition, prime habitat for this snake is located within 600 feet of riparian habitat, which is required for breeding (Beeman, 1990). Such habitat is present in the northern part of the project site, north of the intermittent drainage. Alameda whipsnakes consume mainly lizards, and especially fence lizards (Sceloporus spp.). They also forage on treefrogs, and occasionally rodents, birds, and snakes (Beeman, 1990).

Preliminary site reconnaissance indicated that the project site meets habitat requirements for Alameda whipsnake habitat. In addition, snakes have been reported near the site, in Leona Heights Park approximately 0.6 mile south of the site in undeveloped hillsides like those of the project site. In order to determine if the project site supports the Alameda whipsnake a study was conducted by Dr. Samuel McGinnis (1992). The following is a summary of the study which appears in its entirety in Appendix E. The survey was conducted according to methodology developed by CDFG between March 25 and June 28, 1992. Nine trap line units were placed at points adjacent to coastal scrub habitat where snakes following the scrub grassland border would be intercepted. The study included a total of 810 trap days. No Alameda whipsnakes were captured or observed on the project site during the course of the study.

Results of the trapping study indicate that the site supports a large population of other snake species which indicates that there would be competition for the available lizard prey on site. The preferred prey species of the Alameda whipsnake is the northwestern fence lizard which is easily captured by the sight-oriented whipsnake. The California alligator lizard, which was found to be more numerous on site than the northwestern fence lizard, is more secretive and thus cannot be readily detected by a sight-oriented predator, such as the whipsnake. Thus, the fact that the California alligator lizard is in good abundance on the site does not offset the fact that the whipsnake's preferred prey, the northwestern fence lizard, is nearly absent.

A habitat scoring system for the Alameda whipsnake has been devised to rate general habitat quality and its potential to support a whipsnake population. Factors rated include availability and type of prey present at the site, availability of retreats, canopy characteristics, and slope exposure. Scores in each category range from a low of 0 to a high of 3. When the scoring system is applied to the project site, the project site receives a total score of 7 out of 12. A score of 7 represents a marginal habitats. In previous studies, sites scoring a 7 did not contain indications of whipsnake presence. The site is also not adjacent to areas containing larger stands of higher quality scrub or chaparral habitat so this site would not be considered marginal habitat adjacent to habitat of greater value. In summary, the Alameda whipsnake was not found to occur on the project site and the low habitat score indicates that the site would not support a population of Alameda whipsnakes if individuals did wander through the property (McGinnis, 1992).

BERKELEY KANGAROO RAT. The Berkeley kangaroo rat (Dipodomys heermanni berkeleyensis) is associated with mixed evergreen and coastal vegetation habitats. Although historical records show that this species occurred in the Berkeley and Oakland Hills, it has not been seen since the 1930s and may be extinct.

CALLIPE SILVERSPOT. The callipe silverspot (Speyeria callipe callipe) has been found in the Oakland Hills and at Joaquin Miller and Redwood Regional Parks. Recorded sightings of this butterfly in the Oakland Hills may be in error because of the taxonomic confusion of this subspecies with another subspecies, Speyeria callipe comstocki.

BAY CHECKERSPOT. The bay checkerspot (Euphydryas editha bayensis) is found in areas of serpentine soil and rock outcroppings in grassland habitats. its primary food sources are plant species associated with serpentine soils. Serpentine soils are not found on the project site and therefore this species is not expected to occur on the site.

BURROWING OWL. The burrowing owl (Athene cunicularia), a formerly common resident throughout much of California, is a small ground dwelling owl of open country, particularly grasslands and a variety of desert habitats. Burrowing owls are found principally in sparse or open canopy situations where there are existing burrows, elevated perches or low vegetation close by and a high percentage of bare ground. Grassland areas of the site were traversed during site reconnaissance and only one burrow of suitable size for a burrowing owl was observed (see Appendix F-1 for methodology). It was not near elevated perched or low vegetation and therefore was not considered suitable burrowing owl habitat. No other burrows of suitable size were observed.

ALAMEDA MANZANITA. The Alameda manzanita (Arctostaphylos pallida) is a state listed endangered species and a Federal Candidate 1 species for endangered listing. This endemic plant is considered to be of the highest priority by the California Native Plant Society (CNPS). It is a shrub which occurs amidst chaparral and broadleaved upland forest communities upon steep slopes and barrens of the East Bay Hills in Alameda and Contra Costa Counties. The plant is a highly restricted species with very specific habitat requirements; it only inhabits south and east-facing slopes of 20 to 40 degrees near ridge tops that receive up to 10 inches of additional precipitation from summer fog, and it is limited to sterile mineral soils derived from cherts, siliceous shales, and sandstone. Alameda manzanita is a fire-adapted shrub, requiring periodic fires to remove organic litter, recycle plant nutrients, scarify seeds for germination, and rejuvenate populations. Associated species at some occurrences include coast live oak, bush monkeyflower, and bracken fern, all of which inhabit the project site.

The Alameda manzanita is extremely rare and threatened with extinction, due to a number of environmental factors. There are approximately one dozen known occurrences, half of which are damaged or declining. One population is protected on Huckleberry Ridge in the Oakland Hills as part of a botanical reserve set up by the EBRPD. Approximately 50 percent of the plants were affected with a root fungus in the early 1980's, and escaped introduced shrubs and ground cover compete with the rare manzanita for light, space, and nutrients. Furthermore, the manzanita suffers from the possibility of genetic

introgression from Arctostaphylos cultivars used as landscape plants. All of these environmental factors have combined to imperil the existence of this unique manzanita species.

During the June 1991 site visit, the site was systematically walked and no individual manzanita plants of the Arctostaphylos genus were noted in open grass and scrub areas on the project site (see Appendix F-1 for methodology). Alameda manzanita is not expected to inhabit the site since its habitat requirements indicate slopes that are less steep than that found in the project site. However, several environmental factors are present that could support a manzanita population on this site, including extant plant communities, slope face (north of the intermittent swale), fire climate, soils derived from shale and sandstone, and fog incursion.

DIABLO ROCK ROSE. In the 1920s a specimen of Diablo rock rose (Helianthella castanea) was reported in Leona Heights Park, approximately 0.5 mile south of the project site, amidst habitat similar to that on the site. However, according to the CNPS and the CNDDB, this plant is presumed extinct in the Oakland Hills, as its occurrence has not been confirmed in the last 70 years. This forb is a Federal Candidate 2 for endangered listing, and is not listed at the state level. The CNPS considers it to be a plant of the highest priority, as it is limited to a few highly restricted populations and is endangered in a portion of its range, threatened by urbanization. The plant is found in grassy areas of foothill woodlands in the San Francisco Bay region, especially in the vicinity of Mount Diablo, and is only conspicuous during its flowering months of April and May. The Diablo rock rose is found at elevations from 500 to 4,000 feet. The project site is located within the forb's elevation limits, at approximately 1,000 feet above mean sea level. However, this plant is not expected to exist on the project site.

PRESIDIO CLARKIA. The presidio clarkis (Clarkia franciscana) is a state listed endangered species and a Federal Candidate 1 for listing. It has been seen in the vicinity of Skyline Boulevard in Oakland. It is associated with serpentine outcrops and serpentine soils in valley and foothill grasslands. Serpentine does not occur on the project site, therefore this species is not expected to be found on the site.

Regulatory Agencies

U.S. ARMY CORPS OF ENGINEERS (USACE). Under the Federal Water Pollution Control Act of 1972 as amended (the Clean Water Act, 1977, Section 404) the USACE, a branch of the U.S. Army, regulates the disposal of dredged or fill materials into the "waters of the United States or adjacent wetlands." Preliminary indications are that the placement of fill in the northern intermittent stream and the second drainage swale on the project site would require authorization from the USACE. The type of authorization required can be in the form of a Nationwide Permit or an Individual Permit. Determination as to the type of permit required would be made by the USACE. Any widening of Redwood Road that would impact Redwood Creek would also require authorization from the USACE.

CALIFORNIA DEPARTMENT OF FISH AND GAME (CDFG). The CDFG has direct jurisdiction pursuant to Fish and Game Code Sections 1601-1603 in regard to any proposed activities which will divert, obstruct, or change the natural flow or bed of any river, stream, or lake designated by the department or will

use materials from streambeds. Sections 1601-1603 allow the CDFG to review the project and propose reasonable modifications to the proposed construction for the protection and continuance of a fish or game resource that may be substantially adversely affected by such construction. CDFG comments are presented in a Streambed Alteration Agreement. If mutual agreement between the CDFG and the affected party is not reached, agreement will be reached through an arbitration procedure to be completed prior to the construction of the proposed project. Fish and Game Code Section 5650f gives the CDFG jurisdiction over the input of all deleterious substances, such as silt resulting from construction activities, into the waters of the State of California. The CDFG has jurisdiction over all drainages identified on U.S. Geological Survey (USGS) 7.5 minute topographical maps by blue solid or dotted lines. In addition, intermittent drainages not identified on USGS maps may be under the department's jurisdiction if they support significant riparian vegetation. Fish and Game Code Sections 1601-1603 apply to the west branch of Redwood Creek, located across Redwood Road from the project site, the intermittent drainage in the northern portion of the property, and the middle drainage on the site (CDFG, 1992).

City of Oakland General Plan. The City of Oakland has indicated an objective to manage and preserve native flora and fauna and local rare and endangered species in its General Plan policies. A primary goal of the General Plan is to conserve the planning area's native vegetation and wooded areas for the protection of aquatic and wildlife habitats. The following policies from the Open Space, Conservation and Recreation Element of the General Plan apply directly to the proposed project:

- Efforts should be made to perpetuate the full range of plant types and plant communities, and therefore also wildlife variety, found in Oakland.
- Special attention should be given to the protection of rare and endangered species.
- Where new development occurs, examples of native vegetation should be retained, and where feasible, large sections should be left undisturbed for ecological, educational, and aesthetic benefit. Where appropriate, the development should incorporate a diversity of suitable new plant materials to provide food and shelter for wildlife.
- As much as feasible, wooded tracts of open land should be preserved, with only careful inroads for development allowed.
- The removal of large live trees, wherever they occur, should be avoided for desirable species of trees.
- Extensive tree planting programs should take place in most residential and commercial areas.
- Wildlife and natural vegetation should be protected from indiscriminate use of dangerous pesticides and herbicides, especially in areas where topography and wind can facilitate the spread of these substances and promote the accidental poisoning of plants and animals.

- Wherever possible, landscaping should include use of native plant species.

City of Oakland Tree Ordinance

The project site is subject to the provisions of the Tree Preservation ordinance of the City of Oakland. According to this ordinance, protected trees are defined as coast live oaks measuring at least four inches in diameter at breast height (DBH) and any other trees measuring nine inches DBH or larger, except eucalyptus trees which are not protected by the ordinance. Tree removal permits are required for all protected trees which are to be removed or which are located within 10 feet of the proposed building footprint or perimeter of earthwork.

The ordinance also requires that adequate protection be provided during the construction period for trees planned for preservation. The following are some of the relevant conditions of approval that may be issued in conjunction with any tree removal permit:

- Before the start of any clearing, excavation, construction or other work on site, every protected tree deemed to be potentially endangered shall be fenced off at a distance from the base of the tree to be determined by the tree reviewer.
- Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrient. Any excavation, cutting, filling, or compaction of the existing ground surface within the protected perimeter shall be minimized.

Adequate plantings shall be provided in order to prevent excessive loss of shade, erosion control, groundwater replenishment, visual screening, and wildlife habitat. The tree reviewer may require a landscape plan showing the replacement planting and the method of irrigation.

All applicants for tree removal permits are required to provide a tree survey and site plan which indicates the location, species and DBH of all protected trees located within 30 feet of proposed development activity on the project site and indicating which trees are proposed for removal. The applicant has conducted a tree survey which is discussed below.

IMPACTS

Standard of Significance. A project will normally have significant adverse impacts on vegetation and wildlife if it would: (1) substantially affect a rare or endangered species, (2) interfere substantially with the movement of any resident or migratory fish or wildlife species, or (3) substantially diminish habitat for fish, wildlife, or plants.

3.6-A. Vegetation. The vegetation clearing, grading, and building on the proposed homesites will result in the removal of native bay laurel, and coast live oak trees, a significant adverse biological impact. The density of the

proposed development and the steepness of the slope will require substantial grading and subsequent removal of a significant amount of vegetation, including a native stand of dense oak woodland, which is given high priority for preservation by the City of Oakland. The applicant has conducted a tree survey which is on file in the Planning Department of the City of Oakland. The tree survey indicates that 21 mature oaks and four bay laurel would be required to be removed for building footprints and the project roadway. Approximately 28 additional trees are located within 10 feet of proposed building footprints and the perimeter of earthwork and therefore would also require tree permits if they were to be removed. This estimate is based on the tree count map prepared by MSD Engineers for Leen Mayer, July 1992. In addition to providing valuable wildlife habitat and erosion control, many of the trees to be removed are visible to motorists on Redwood Road and to some trails near Skyline Boulevard in Redwood Regional Park (see Section 3.2, "Visual/ Aesthetics"). The rich woodland that surrounds the intermittent swale in the northern part of the site will be eliminated by the project. In addition, the applicant estimates 52 eucalyptus trees along Redwood Road will be removed to accommodate the proposed project, which will alter views to motorists on Redwood Road and reduce scenery (see Section 3.2, "Visual/ Aesthetics."

The vegetation that would be preserved in the development could be indirectly damaged by construction activities and related changes in the local ecology. Grading and construction activities can have detrimental effects on vegetation by directly destroying roots, compacting soils, causing excavated material to accumulate within the dripline of trees, and producing dust which settles on leaves and needles of adjacent trees, shrubs, and other vegetation. At the proposed density of development on the steep slopes, it will be difficult to preserve trees in the development, and grading activities could lead to the demise of trees intended for preservation. These adverse construction impacts can be avoided with careful construction practices.

City of Oakland General Plan. The proposed project would result in significant inconsistencies with the City of Oakland General Plan. Specifically, the city's goal to preserve wooded tracts of open land in the city limits where feasible would not be adhered to. Though the city exempts "careful inroads for development," the project is not considered to be an example of such development, because valuable habitat would have to be removed to accommodate grading for the residences and the roadway.

3.6-B. Future residents of the project site may introduce exotic plant species which could displace native vegetation and alter the microclimate inherent to the oak woodland community. Microclimate would also be altered due to the changes in local temperatures and humidity which inevitably follow significant vegetation removal. Increased exposure to direct sunlight or precipitation would introduce new factors in the natural plant succession processes occurring on the project site. These modified processes would produce new and different plant communities which, in feedback fashion, affect the site's microclimate. Because the present stands of oak woodland are highly valued by the local community and the City of Oakland for scenic, cultural, and biological reasons, introduction of new plant communities, through vegetation removal and subsequent introduction of exotic species by future residents, as well as microclimate changes would be considered a significant adverse impact.

3.6-C. Wildlife. At the proposed density of development, the removal of trees for the establishment of building sites on the project site will modify wildlife habitat significantly. Reduction of available local habitat attributable to this removal would displace an appreciable number of wildlife species to adjacent habitat areas on the ridges to the north and west, and to the narrow and steep strip up the ridge to the east (on the project site between the project and the Balmoral development). This displacement of wildlife would increase demands on adjacent communities off the site to provide food, water, and shelter.

An island of habitat would be created between the project, the Balmoral development, and Skyline Ranch to the south, isolated from habitat in Redwood Canyon by the project. This area would be considered poor habitat due to its isolation. The intensive human activity required to bring the proposed project to completion will probably cause displacement of more reclusive wildlife species out of wooded areas near the project site. In these ways, local species diversity and numbers within species would be altered by project activity, and these biological impacts would be considered significant and adverse.

Riparian biology associated with the west branch of Redwood Creek could be adversely affected by construction activities if proper precautions are not taken during grading and building operations. Removal of vegetation during grading leads to greater topsoil erosion rates, which if unchecked could result in siltation of the local drainages during the rainy season. The risk of erosion is very severe on the site (see Section 3.4, "Geology," and Section 3.5, "Hydrology"), which makes siltation of the local drainage a probable result of the project. Particles of nutrient rich topsoil, displaced by rain and runoff, would be carried downslope into the water courses, increasing stream turbidity and downgrading water quality. These changes can adversely affect local wildlife, as the principal local water sources may become tainted by nutrient loading and associated algal blooms. Siltation of the west branch of Redwood Creek is a potential significant adverse impact upon the ecosystem of the creek downstream of the project site. This siltation could affect the sensitive native steelhead rainbow trout population.

In addition, if the addition of a left turn pocket near the project entrance point on southbound Redwood Road cannot be achieved by the widening of Redwood Road on the east side (project site) and/or alterations to the proposed project roadway location and roadway widening would be necessary on the west side, additional impacts would result. These impacts may include aquatic habitat degradation of Redwood Creek. The severity of the impacts due to road widening would be dependent on the actual alteration proposed.

The drainage swale in the northern part of the site is proposed to be altered due to the project, which would constitute a significant adverse impact to local vegetation and wildlife. Build-out of the proposed project would substantially increase the square footage of impermeable surfaces (e.g., buildings and pavement) on the project site. Such an increase will lead to increased surface runoff, which in the case of the project site, will necessitate alteration of the streambed for proper storm water control. The one-way roadway planned for the development is planned just north of the streambed, which would require removal of many native oak and bay trees.

Alteration of this intermittent stream would result in removal of valuable woodland vegetation, reducing habitat value and eliminating a local migratory corridor for wildlife. Storm water control measures, such as drainage ditches catchnets or diversions, that alter the flow of the drainage would induce a significant adverse biological impact and would require coordination with the CDFG pursuant to Section 1603.

3.6-D. Sensitive Species. The project will have significant short-term and long-term impacts on the native population of steelhead rainbow trout (Onchorhynchus mykiss) that use the west branch of Redwood Creek for spawning habitat. In the short-term, the construction of the project could lead to siltation of the creek, and the smothering of sensitive spawning gravels with mud. Minor grading and geological testing conducted on the site as of the June 1991 site visit has caused visible siltation of the creek, in spite of erosion control measures conducted on the site such as erosion control fencing, plastic lining of drainageways, and strategic placement of hay bales. Based on an examination of the streambed both upstream and downstream of the site in June 1991, it appears that grading and construction activities will result in siltation of the sensitive creekbed, unless strict erosion control measures are employed.

Siltation of the stream will reduce local trout populations in the short-term. Population reduction could range from moderate to severe, depending on the time of year grading and construction occur. If erosion occurs between January and April, for instance, reproductive activities on the creek could be obstructed for a year or more due to the elimination of spawning habitat and/or the smothering of eggs by sedimentation. Moreover, construction activities could adversely affect water quality by adding oil, grease, and lime.

Long-term impacts to the steelhead rainbow trout population of the west branch of Redwood Creek due to the project are also significant. Increased surface runoff from the site attributable to the project will drain directly into the creek and could include urban pollutants such as oil, grease, soap suds, antifreeze, rubber particulates, fertilizers, herbicides, and pesticides, all of which will adversely affect water quality in the creek. In addition, catastrophic incidents affecting the creek's biology will increase due to the development in the largely undeveloped watershed. In the early 1980's, catastrophic incidents occurred in the west branch of Redwood Creek approximately once per year, sometimes adversely affecting the creek's trout populations. Automobiles have run off Redwood Road into the creek, spilling gasoline and killing young of the year; car batteries have been dumped in the creek, poisoning spawning gravels with battery acid; a gasoline spill at a service station at the Redwood Road/Skyline Boulevard intersection adversely impacted the stream; and sewage overflow from the line along Skyline Boulevard flowed freely over Redwood Road into the creek (Alexander, 1991). More intense human activity such as that proposed for the site leads to greater probability of such catastrophic incidents occurring in the watershed. Over time, these catastrophic incidents and urban pollutants attributable to the project will combine to have a long-term impact on the trout population of the stream, and could reduce its viability as a native steelhead trout fishery.

MITIGATION MEASURES

The following mitigation measures related to biological impacts will reduce significant impacts to less-than-significant levels, unless otherwise indicated:

3.6-A. Vegetation

In order to avoid significant biological impacts, the site plan would have to be substantially altered so that it could be considered a "careful inroad for development," as dictated by the General Plan. One way this could be achieved by limiting development to the non-native eucalyptus woodland proximate to Redwood Road, and incorporating large open space zones in the development, and minimizing removal of important native trees, particularly along the northern intermittent stream on the property.

Future building construction or site landscaping should be required to be planned to avoid removing mature native trees and other native vegetation when possible.

3.6-B. Vegetation removed as a result of project activities and previous grading activities should be replaced with native or naturalized species that are of value to local wildlife, and native vegetation should be retained wherever possible. Native plants are generally more valuable as wildlife food sources and require less irrigation, fertilizers, pesticides, and herbicides than introduced species.

A landscaping plan should be submitted to the city and the East Bay Regional Park District for approval. This plan should provide for the revegetation of any exposed construction areas using native, drought tolerant species which require a minimum of herbicides, pesticides, and fertilizers to maintain. Individual lots should also be required to be landscaped with native species. The homeowner's association should be responsible for the maintenance of the landscaping in areas not part of individual lots and for ensuring that invasive species are not introduced on individual lots.

3.6-C. Wildlife. Construction activities should be as limited in areal extent as is feasible to minimize wildlife habitat disturbance. Temporary fences should be erected between construction sites and designated open space natural areas to protect the vegetation from being trampled by human traffic and equipment access and storage. All trees to be preserved should be fenced at their driplines or at a distance determined by the tree reviewer and indicated in the Oakland Tree Preservation Ordinance.

The machinery, earthen, or stockpiled materials produced or used during the construction of water systems, storm drainage, buildings, and roadways should be kept away from the driplines of trees, vegetated areas, and drainage areas.

Mitigation measures regarding preservation of water quality, decreasing runoff, and reducing erosion listed in Section 3.5, Hydrology," should be implemented.

Native trees, particularly oaks, should have high priority for preservation. Coast live oaks are an important part of the visual landscape in Oakland,

provide high quality habitat for wildlife, and have low recruitment from saplings. If oaks need to be removed, three oaks should be should be planted for every one removed to ensure that the native habitat endures into the 21st century. The saplings should be surrounded by temporary mesh fences to prevent damage from grazing by deer. If possible, replacement trees should be planted in designated open space areas. The loss of valuable mature trees would be a significant unavoidable impact of the project as proposed.

The intermittent drainage in the northern part of the property and its associated vegetation should be considered for designation as open space, as it is biologically valuable and is connected to the open space network of Redwood Regional Park. In this way, the project would preserve the most valuable biological resource on the site and not create an island of habitat. The loss of this wildlife habitat would be a significant unavoidable impact of the proposed project.

Permits will be required for the removal of all trees covered by provisions of the City of Oakland Tree Ordinance.

3.6-D. Sensitive Species

Due to site-specific factors such as soils with very severe erosion hazard and the greater probability of catastrophic incidents associated with increased human activity within the Redwood Creek watershed, both short-term and long-term impacts to the native steelhead rainbow trout populations are expected. The following mitigation measures are recommended to minimize the environmental impact on this special fish population:

Grading and construction activities should be prohibited on the site between October and May.

An erosion control plan should be designed pursuant to guidelines of the Association of Bay Area Governments. This erosion control plan should be subject to the approval of the East Bay Regional Park District's Fisheries Department in addition to the City of Oakland Public Works Department.

All mitigation measures in Section 3.5, "Hydrology," regarding preservation of water quality and reducing erosion should be implemented.

To reduce the buildup of numerous contaminants on paved surfaces, a program of regularly sweeping driveways and streets should be considered for watershed protection.

While mitigation measures suggested above can reduce water quality impacts to Redwood Creek from activities on the project site, they cannot reduce the impact of potential catastrophic events associated with more intense human activity in the creek vicinity (these events could include, for example, increased car accidents, dumping in the creek, and other such events). These catastrophic events are expected to cumulatively have a significant adverse impact on the water quality of Redwood Creek and therefore will impact the spawning trout population. This would be a significant unavoidable impact of implementation of the proposed project.

3.7 AIR QUALITY

EXISTING SETTING

Climate. The project site in the City of Oakland is located in the San Francisco Bay Area, a large shallow air basin ringed by hills which taper into a number of sheltered valleys around the perimeter. Summers are warm and relatively dry; winters are mild and generally rainy.

Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human activity. Ventilation, or natural replacement of air, directly affects atmospheric dispersal capacity. Temperature inversions and low wind speeds can reduce ventilation in the Oakland area. The hills rimming the basin sometimes act as a trap, preventing horizontal movement of air into and out of the basin. Under summer and autumn inversion conditions, pollutants may become trapped due to poor ventilation in the basin. In winter, shallower radiation inversions may promote the accumulation of pollutants in the A.M., but midday heating usually initiates vertical air currents resulting in improved air quality (Bay Area Air Quality Management District, Air Quality Handbook, 1989-1990).

Air Quality Criteria. The applicable air quality criteria for the proposed project are the State of California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS). The standards have been developed to protect the public from various known undesirable effects upon health, vegetation, and property. The Bay Area Air Quality Management District (BAAQMD) is the regional agency with the responsibility for enforcement of these standards.

Attainment Status. The project site is located in the San Francisco Bay Area air basin, a basin which is a non-attainment area for ozone (O_3), ten micron particulates (PM_{10} , particulate matter of less than ten microns), and carbon monoxide (CO) in some urban areas. Non-attainment refers to the condition in which the federal ambient air quality standards are exceeded in the area. With the recent passage of the California Clean Air Act of 1988 (AB 2595), the Bay Area is also a non-attainment area for these pollutants with respect to the more stringent State of California standards. As a non-attainment region, the region must participate in the State Implementation Plan pursuant to the federal Clean Air Act and amendments thereto. The air quality record for the project area, including the number of days in exceedance of state and federal standards, is presented in Table 3.7-1.

The California Clean Air Act of 1988 (AB 2595) requires that all air pollution districts in California show attainment of California State Air Quality Standards by the earliest practicable date in their Air Quality Plans, and that overall emissions of air pollutants will be either reduced or maintained depending upon the district. Pursuant to AB 2595, the San Francisco Bay Area has been classified as a "severe" non-attainment area by the Air Resources Board, because the 1991 Clean Air Plan projects an air quality attainment date no later than 1997. The Bay Area Air Quality Management District (BAAQMD) has adopted the 1991 Clean Air Plan to reduce emissions in order to achieve and maintain the ozone and carbon monoxide standards by the earliest practicable date.

TABLE 3.7-1. VIOLATION OF AIR POLLUTION STANDARDS AT MONITORING STATIONS IN THE PROJECT VICINITY, 1987 THROUGH 1990

NUMBER OF DAYS WITH PERIODS IN VIOLATION OF CURRENT STANDARDS AT MONITORING STATIONS IN OAKLAND AND SAN FRANCISCO					
POLLUTANT (CURRENT STANDARDS)	MONITORING STATION	1987	1988	1989	1990
Ozone, O ₃ (0.09 ppm, 1 hour) S	Oakland	0 (P)	1 (P)	0 (P)	0
Carbon Monoxide, CO (9.1 ppm for 8 hours) F, S	Oakland	0	0	0	0
Nitrogen Dioxide, NO ₂ (0.25 ppm, 1 hour) S	San Francisco	0	0	0	0
Ten Micron Particulate Matter, PM ₁₀ (50 µg/m ³ , 24 hours) S (a)	San Francisco	4	5	13	12
(30 µg/m ³ , AGM) S	San Francisco	No	No	No	No
(a) PM ₁₀ measured once every six days. Actual annual days of excess PM ₁₀ levels would be greater than the values shown.					
µg/m ³ : micrograms per cubic meter ppm: parts per million AGM: Annual Geometric Mean S: State Standard F: Federal Standard (P): Partial Data Yes/No: Indicates whether the Annual Mean Standard was violated for that Year.					
Source: California Air Resources Board; Annual Data Summaries, 1987-1989; Earth Metrics Incorporated, 1991.					

The 1991 Clean Air Plan includes several updated and stringent programs. Currently no indirect source rule exists for the control of mobile emissions resulting from commercial and residential projects. BAAQMD expects to adopt a rule by the summer of 1993. The BAAQMD recommends impact assessment of indirect sources based on modeling of ambient concentrations for CO and based on stationary source limits for nitrogen oxides and hydrocarbons (ozone precursors) (BAAQMD, 1985).

Air Quality Record. The BAAQMD air quality monitoring station nearest the project area is located in Oakland on Alice Street. The Santa Rosa station has monitoring facilities for ozone and carbon monoxide. The nearest BAAQMD monitoring station that has facilities to monitor ten micron particulates and nitrogen oxides is in San Francisco, approximately 10 miles to the west. Table 3.7-1 presents the air quality monitoring results for the stations at Oakland and San Francisco for the years of 1987, 1988, 1989 and 1990 (California Air Resources Board, 1987 through 1990).

No days of excess pollutant levels were recorded at the Oakland station for the pollutant carbon monoxide (CO). For the pollutant ozone (O_3), the hourly average exceeded the CAAQS state standard of 0.09 parts per million (ppm) on one day at Oakland in 1988. Multiple days of 24-hour average ten micron particulate (PM_{10}) levels in excess of the CAAQS were recorded at the San Francisco station. These data reflect the current non-attainment classification for O_3 and PM_{10} in the San Francisco Bay Area Air Basin.

Sensitive Receptors. A sensitive receptor is any living being or place whose comfort, health, or well-being may be impaired or endangered by the existence of pollutant emissions into the atmosphere. Sensitive receptors may include residences, schools, hospitals, senior care homes, and other public facilities. Sensitive receptors within the project area are primarily existing single-family residences, surrounding the project site and future residents of the proposed project.

IMPACTS

Standards of Significance. Air quality impacts are determined according to the following criteria:

1. Are California's ambient air quality standards violated?
2. Will construction emissions (e.g. dust) result in nuisance or contribute to areawide non-attainment?
3. Will project emissions exceed one percent of existing emission levels in Alameda County? Will ABAG growth projections for the City of Oakland be exceeded by the proposed project? Will project emissions exceed Best Available Control Technology (BACT) or offset threshold levels in the Bay Area Air Basin?
4. Will the project be consistent with goals or regulations of the 1991 Clean Air Plan?

3.7-A. Construction Impacts. Earthmoving, hauling and other construction activities would result in localized and temporary increases in the levels of PM_{10} . Specific types of activities include new roadway and building construction and improvements to utility systems such as water, sewer, and electrical power lines. Construction vehicles travelling over unpaved roadways will also result in temporary increases in levels of PM_{10} .

The significance of construction-related particulate emissions is determined not only by particulate (dust) emission levels and concentrations, but also by the proximity of construction to sensitive receptors. The BAAQMD regulates emission of particulates from construction sources, pursuant to section 41700 of the California Health and Safety Code regarding nuisance emissions.

Pedestrians and residents who occupy the area before construction is completed would be exposed to some dust near the construction area boundaries; however, with the mitigation measures discussed in this section, no significant impacts are anticipated to occur due to construction-related dust emissions.

3.7-B. Regional Air Quality Impacts. Motor vehicle trips to and from the project site would be the most significant source of operational air pollutant emissions resulting from project development. These pollutant emissions would include CO, nitrogen dioxide, and non-methane organic gasses of hydrocarbons. Added electricity demand would cause a negligible percentage emission change from fossil fuel power generation.

Project emissions levels for mobile sources during the operational phase were also calculated using the URBEMIS3 computer program (California Air Resources Board, 1990). The URBEMIS3 results, in the form of total emissions associated with the project, appear in Table 3.7-2.

Table 3.7-2 shows that for the mobile emissions associated with the project, increases of emissions would be less than one hundredth of one percent of countywide mobile emissions. CO would be the pollutant that would increase the most, totaling less than 70 pounds per day. Nitrogen dioxide, an O_3 precursor, would increase by less than 5 pounds per day, while organics, another O_3 precursor, would increase by less than 6 pounds per day.

Emissions increases in the mobile source category due to the project would not exceed countywide emissions by more than one percent for any criteria pollutant or O_3 precursor. Project related emissions will not result in emissions exceeding BACT offset threshold levels. No significant impacts to regional air quality will result from the proposed project and no mitigation measures are required. Because the proposed project will not exceed the population prediction on which the air quality forecasts are based, it is consistent with the 1991 Clean Air Plan. However, mitigation measures are recommended to mitigate any potential project contribution to regionally cumulative air quality impacts.

MITIGATION MEASURES

3.7-A. Construction Mitigation Measures

- To mitigate local and regional significant impacts due to dust and PM_{10} emissions from construction activities, and to prevent fugitive dust

TABLE 3.7-2. COMPARISON OF PROJECT-RELATED MOBILE EMISSIONS TO COUNTY MOBILE EMISSIONS

POLLUTANT EMISSION	QUANTITY OF EMISSION DUE TO PROJECT (POUNDS/DAY)	COUNTY MOBILE EMISSIONS (POUNDS/DAY)
Total Organic (TOG)	5.8	152,000
Carbon Monoxide (CO)	69	1,020,000
Nitrogen Oxides (NO _x)	4.9	196,000
Sources: California Air Resources Board, 1990; Earth Metrics Incorporated, 1991.		

from being transported off site, a complete construction dust control program must be used at all times during construction and some operational activities. These measures, if properly implemented, will reduce all significant impacts to less-than-significant levels.

1. During clearing, grading, earthmoving, or excavation:
 - a) The contractor shall, using water trucks or sprinkler systems, wet down all disturbed areas sufficiently to prevent dust from leaving the site. An effective program of watering of disturbed areas reduces dust by up to 50 percent (U.S. EPA, 1985).
2. After clearing, grading, earthmoving, or excavation is completed:
 - a) The contractor shall seed and water disturbed areas until grass cover is grown.
 - b) The contractor shall wet the disturbed area down repeatedly and sufficiently to form and maintain a crust on the surface to prevent windblown dust. Windblown particulates may be reduced by up to 80 percent by wetting of this type (EPA, 1985).
 - c) All areas that are to be paved shall be paved as soon as possible by the contractor.
3. During construction:
 - a) The contractor shall water the disturbed area sufficiently to prevent dust raised from leaving site.
 - As a minimum, this will include wetting down such areas in the late morning and after work is completed for the day.
 - Increased watering frequency will be required whenever the wind speed exceeds 10 mph, or when visible dust emissions are noticeable at the construction site.
 - b) The contractor shall pave all roadway, driveways, sidewalks, etc., as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

3.7-B. Regional Impact Mitigation Measures

Traffic attributable to the project would not generate significant emission levels; however, the project would contribute to cumulative air quality impacts on a regional level which are significant; therefore, the following mitigation measure is proposed to address this project's contribution to regionally significant cumulative air quality impacts:

- AC Transit should consider extending the route of the bus line that currently travels on Redwood Road to Merritt College. The route should be extended to the intersection of Redwood Road and Skyline Boulevard. The project applicant should be required to pay a fair portion of the costs of this route extension. This would afford project residents with improved public transportation opportunities which will result in an incremental reduction in vehicle trips from the project. (Please see Section 3.3, "Traffic and Parking," for a discussion of public transportation.)

3.8 PUBLIC SERVICES AND UTILITIES

EXISTING SETTING

Fire Protection. Fire protection for the project site is to be provided by the City of Oakland Fire Department. The first station that would respond to an emergency at the site is station Number 25, located at 2795 Butters Drive, approximately 1.5 miles from the proposed development. This station maintains four fire fighters consisting of one officer, one engineer, and two fire fighters. Emergency response time from this station is approximately five minutes calculated as the time to receive the alarm, the time to dispatch, and the time to travel from the station to the project site. The station is equipped with one engine carrying 500 gallons of water and one brush wagon (a four-wheel drive vehicle) carrying an additional 300 gallons of water (Collins, 1991). Hydrants must be within 500 feet of the farthest part of the building, as the hose is laid. Fire flows required for the proposed development are 750 gallons per minute (gpm). Hydrants on dead-end streets must be 150 feet from the dead-end (Collins, 1991). The character of the site vegetation and its location on the wildland/urban interface make this site within an area of extreme wildfire hazard.

Police Services. The City of Oakland Police Department serves the project site area. The city has one police station located at 455 Seventh Street. There are currently 669 sworn officers on the force (Bellman, 1991). The city utilizes a beat system. Response times to the project area vary depending on the priority of the type of call. Calls regarding emergencies can be dispatched in less than one minute, while lower priority calls are usually dispatched within 45 minutes (Gabby, 1991).

Natural Gas and Electricity. Natural gas and electricity are provided to the project area by the East Bay Division of the Pacific Gas and Electric Company (PG&E). Electricity is generated by a combination of hydroelectric, thermal, geothermal, wind, turbine, solar, nuclear, and fossil fuel (Sloan, 1991). Natural gas is supplied from sources in Texas, Canada, Mexico, and Montana.

Electricity to the project site can be distributed through any one of three PG&E substations. Substations J, EDES, and X are located at 51st and Coliseum, Edes Avenue, and Park Boulevard and Interstate 580, respectively. The closest supply lines to the project site currently serve the ridgetop and other area development (Sloan, 1991).

Solid Waste Disposal. Solid waste collection and disposal services from the project site are provided by the Oakland Scavenger Company (OSC), 7677 Oakport Street, Suite 350, Oakland. Nonhazardous solid waste is hauled to OSC's transfer station located at 2615 Davis Street, San Leandro and is transferred to the Altamont Landfill, 10840 Altamont Pass Road, Livermore in Alameda County.

The landfill is 1,700 acres and is 10 years old. Capacity is estimated to occur in approximately 60 years. Currently Altamont Landfill has a permit to use 210 acres of the 1,700 acres for Class III garbage and estimates the

capacity of the 210 acres will be reached in 10 years (Griffith, 1991). This landfill does not accept sludge from sewer systems or septic tanks.

Telephone Service. Telephone service is provided to the project site by Pacific Bell, 685 A Street, Hayward, California. Telephone cabling to the project site is provided jointly with PG&E in underground trenches. The cable is made of plastic, adding no toxic substance to the soil. Metering of telephone usage is done through a set of cable pairs that go back to Pacific Bell's central office (Miller, 1991).

Wastewater Services. East Bay Municipal Utility District (EBMUD) provides wastewater interception and treatment services for the City of Oakland. The city owns the sewer lines and approves connections for services. Deteriorated sewer pipes and improper storm drain connections permit overflows to enter the sewer system during wet weather conditions. Construction of relief sewers that will handle peak flows of the proposed project began in the fall of 1990, and are expected to be completed by 1993 (Kim, 1991).

The EBMUD wastewater treatment plant has the design capacity to treat approximately 120 million gallons of sewage per day (mgd) during dry weather and 300 mgd during wet weather. The treatment plant currently operates below capacity during dry weather flow periods. However, wet weather flows often exceed the capacity of the system. The main wastewater treatment plant is currently undergoing improvements in order to increase wet weather treatment capacity from its current 300 mgd to 415 mgd (McGowan, 1991).

Water Services. EBMUD serves part of Alameda County and part of Contra Costa County, and provides service to approximately 1.1 million customers. Although water demand varies depending on drought and other factors, a 10 year average demand has been calculated at 216.8 mgd annually. According to a 10 year study, peak demand water usage was 279 mgd during the month of July. In the area of the project site, the average amount of water per single-family residence each year is approximately 270 gallons per day (McGowan, 1991).

Public Schools. The proposed residential development will generate a demand for educational services. The project site is located within the boundaries of the Oakland Unified School District. The District has available capacity within the system to house new students; however, some areas are more overcrowded than others. Schools located near the project area which currently have available capacity to house new students generated by the proposed development are Burckhalter Elementary School, Montera Junior High School, and Skyline High School. Burckhalter Elementary School has an enrollment of 276 students and a capacity of 309 students. Montera Junior High School has an enrollment of 802 students and a capacity of 1,138. Skyline High School has an enrollment of 1,812 and a capacity of 2,098 (Long, 1991).

IMPACTS

Standard of Significance. A project may have a significant impact on the environment if it will interfere with emergency response plans or emergency evacuation plans; conflict with established recreational, educational, religious, or scientific uses of the area; substantially degrade or deplete

ground water recharge; or extend a sewer trunk line with capacity to serve new development. Impacts to public facilities by this project may be determined if the project will induce substantial growth or concentration of population. Secondary effects of such concentration would include increased demand for school, police, fire, water and storm sewer services, as well as utilities.

3.8-A. Fire Protection. The proposed project would increase the demand for fire protection services. Improper project design would create significant problems for the Oakland Fire Department. Therefore, proper protection measures are required by the fire department and are reflected in the mitigation measures. The proposed project site is located in a critical fire area, as designated by the City of Oakland General Plan, Environmental Hazards Element due to its vegetation characteristics and its location on the urban/wildland interface, and therefore will be subject to more stringent fire protection standards. Building code requirements are currently changing in the City of Oakland due to the fire storm of October 1991. The proposed development will be subject to all building code requirements and additionally recommended fire protection requirements may be necessary as determined by the City of Oakland Fire Department.

3.8-B. As currently designed, the 16-foot-wide proposed project roadway does not meet the requirements of the Oakland Municipal Code and would not provide adequate project access for emergency equipment (see Section 3.3, "Traffic and Parking").

Police Services. The proposed project would result in an incremental increase in demand for police services. However, the project is not expected to create the need for additional personnel (Muzar, 1991).

Natural Gas and Electricity. The supply of natural gas and electricity to the project site will neither tax the supply capabilities nor affect delivery of services to other customers in the area. Therefore, there are no significant impacts on gas and electricity availability, nor are impacts to existing customers.

3.8-C. Solid Waste Disposal. The project would not significantly increase the demand for solid waste disposal services. The Oakland Scavenger Company anticipates no problems in providing collection and disposal services to the proposed project. The existing landfill near Altamont has adequate capacity for solid wastes generated by the proposed project. According to Assembly Bill 939, a city or county will divert 25 percent of all solid waste from landfill or transformation facilities (recycling) by January 1, 1995, through source reduction, recycling, and composting activities. Also, this diversion must increase to 50 percent by January 1, 2000. In order to preserve remaining disposal capacity and meet AB 939 requirements, efforts should be made to minimize the amount of solid waste going to landfills by maximizing recycling and waste reduction efforts. The direct impacts of this project are less-than-significant; however, the project will contribute to cumulative impacts on a regional level; therefore, mitigation measures are proposed to reduce this impact.

Telephone Service. No significant impacts to telephone services are anticipated by Pacific Bell as a result of providing service to the proposed

project. The Pacific Bell Telephone Company will provide services to the subject site without adverse impacts to its other customers.

3.8-D. Wastewater Services. The amount of sewage that would be generated as a result of the proposed project will not significantly impact wastewater services during dry weather, but may have a cumulative impact on wastewater services during wet weather. This potential cumulative impact will continue until the construction of relief sewers is completed in 1993.

Preliminary project plans indicate that a sewer main will be installed beneath the proposed project roadway. If necessary, a public access easement could be established for access to the mains (Simmons, 1992). The plans also include a pump station located between lot 21 and the proposed project roadway. A pressure pipe running up slope between lots 21 and 22 will connect the pump station to the project sewer main. An extension of the site sewer main will be constructed to connect the project main to the existing main at Redwood Road and Skyline Boulevard. The project applicant will be responsible for necessary additions and extensions to the sewer system. Alternatively, if gravity flow is not sufficient for this plan, the pump station would collect all sewage which would then be conveyed to the existing sewer main on the project site uphill from the project residences. This main currently serves ridgetop residences (Simmons, 1992).

3.8-E. Water Services. Based on the estimated daily water use of 270 gpd for single-family residential units in the project area, the proposed project will generate a demand of 6,210 gallons of water per day. The project itself will not pose a significant impact on the current water supply available to the City of Oakland; however, particularly in light of the six years of drought experienced in the Bay Area, this project will contribute to the cumulative affect on water demand. EBMUD currently recommends that water conservation features be incorporated into the design of houses and landscaped areas to reduce this impact (McGowan, 1991).

Water is provided to the project site by EBMUD via lines owned and maintained by EBMUD. Water mains are located on Redwood Road near Skyline Boulevard. The main would need to be extended and individual hook ups provided to homes (Simmons, 1992).

3.8-F. Public Schools. Using California Department of Education students/residence generation factor of .7 students per household, the proposed project would generate approximately 16 students: 9 in grades K-6, 2 in grades 7-8, and 5 in grades 9-12 (Collins, 1990). These students could be accommodated at Burckhalter Elementary School which currently has an available capacity of 33 students; at Montera Junior High School which currently has an available capacity of 336 students; and at Skyline High School which currently has an available capacity of 286 students. Adequate capacity is available within the Oakland Unified School District to accommodate students generated from the proposed development and generated by developments in the cumulative scenario (see Section 5.3, "Cumulative Impacts," for a list of projects (Long, 1991). Therefore, this is not considered a significant impact.

However, the proposed project may result in cumulative impacts on schools when combined with similar developments being proposed throughout the City of

Oakland. The Oakland Unified School District currently collects developer impact fees of \$1.58 per square foot of residential development which will serve to mitigate cumulative impacts. Capacity is available in the school district as a whole, but some students may need to be transported to schools that can accommodate them when nearby schools exceed their capacity.

MITIGATION MEASURES

The following mitigation measures related to public service impacts will reduce significant and potentially significant impacts to less-than-significant levels, unless otherwise indicated:

3.8-A. Fire Protection. The following measures are required to reduce significant impacts on fire services:

A Class "A" roof is required because the project site is in a critical fire area. Some examples of Class A rated roofs are clay tiles, concrete tiles, fiberglass shingles, metal tiles, and perlite shakes.

Oakland Level 2 (Oakland Special Residential Sprinkler System) should be required in all residences because the project site is in a critical fire area.

If sprinklers are not required, structures three or more stories high are required to contain a secondary exit from the structure that leads to the street.

Fuels management requires that a safety zone be cleared from each home for a distance of not less than 30 feet. No limbs or overhanging branches should be near any structures.

Interconnected smoke detectors will be required for this project.

Stucco exterior or one-hour rating construction on exterior walls of residences should be required to minimize fire hazard.

Every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel is required to be provided and maintained at all times with a screen over the outlet. Such screens should be constructed of nonflammable material with openings of not more than one-half inch in size.

Addresses should be posted on each residence so they are easily read from the street.

In addition it should be required that project landscaping consist of predominantly native, drought tolerant, and fire resistive plants.

3.8-B

All project roadways will be required to conform to city standards (see Section 3.3, "Traffic and Parking").

Building code requirements are currently changing in the City of Oakland due to the firestorm of October 1991. The proposed development will be subject to all building codes and additionally recommended fire protection devices, as determined by the City of Oakland Fire Department.

3.8-C. Solid Waste Disposal. The following measures should be considered to maximize recycling, reduce waste, and promote the consumption of recycled materials:

A curbside recycling program or an on-site recycling center should be incorporated into the project. This could be maintained by a homeowners' association or by provisions implemented by the applicant.

Information should be provided by the homeowners' association to homeowners about the recycling services in the development area. Buy back centers and possible markets for recyclables in the area should be identified in addition to the project recycling program. Homeowners should be encouraged to recycle glass, metal, cardboard, and other materials to the maximum extent feasible.

Insulation and other products made of recycled materials should be used in the construction of development structures.

3.8-D. Wastewater Services

All site sewer lines should be constructed such that storm water will not enter and overload the system. Storm drains should be cleaned of debris periodically. Maintenance of all storm drains and other infrastructure should be required in the Codes, Covenants, and Restrictions for the project.

The proposed sewer system design should meet city standards. The city will require that all gravity sewer mains be located in the public right-of-way for easy access during maintenance.

The applicant should develop plans for the long-term maintenance of the project storm drains. These plans should be approved by the city.

The applicant should develop plans for the long-term maintenance of the proposed pump station and pressure line.

The City Public Works Department has indicated that part of the public sewer which will serve this project is located outside the City of Oakland limits. Legal agreements and easements from appropriate agencies will be required and should be obtained by the project applicant.

3.8-E. Water Services

Water conservation devices such as low flow shower heads and toilets should be incorporated into the design of the proposed residential development in order to mitigate this project's share of regional cumulatively significant impacts.

Landscaped areas should consist of native and drought tolerant vegetation which require less water. The homeowner's association should ensure adequate ongoing maintenance of landscaped areas.

3.8-F. Public Schools

The Oakland Unified School District currently collects a developer's fee of \$1.58 per square foot of residential development which would mitigate project impacts that are less-than-significant on a project basis, but contribute to city-wide significant impacts.

EXISTING SETTING

Sensitive Receptors. Sensitive receptors are those persons and facilities which could be adversely affected by noise. Sensitive receptors in the project area are single-family homes located to the east of the proposed project and the future homes of the project site. Other sensitive receptors are horse riding stables, located 200 feet to the south and 300 feet west of the project site, across Redwood Road.

Noise Sources. Vehicle traffic on Redwood Road will be the major noise source affecting noise levels on the project site. State Route 13 (SR 13), Interstate 580 (I-580), and Skyline Boulevard are noise sources in the area, but these roadways do not add to noise levels at the project site. There are no railroads, industrial areas, or airports within one-half mile of the project site which may impact noise levels on the project site or surrounding sensitive receptors. Incidental noise sources such as airplanes will increase noise levels temporarily on the project site but do not have a long-term affect on the project site noise conditions.

Noise Standards. The Noise Element of the General Plan does not contain noise compatibility guidelines for residential uses. However, General Plan policies recognize that exterior noise levels should be compatible with land use types. Therefore, reference has been made to the recommended standards of the State Department of Health (see Figure 3.9-1). These guidelines identify a sound level of up to 60 Day and Night Average Sound Level (Ldn) as acceptable for residential land use and a sound level of up to 70 Ldn for riding stables. The Ldn averaging system accounts for the greater annoyance potential of nighttime noise by weighting nighttime sound levels greater than daytime levels.

Existing Noise Levels. Existing noise levels at the project site were estimated with the use of a nomograph developed by the Federal Highway Administration (FHWA, 1978). Utilizing the peak hour traffic volume on Redwood Road of 365 vehicles per hour and a distance of 30 feet from the center of the roadway (the maximum distance to homes on the project site), an existing noise level of 62 dBA on the Day and Night Average Noise Level Scale was obtained. A comparison of the calculated existing noise levels for the project site with the guidelines of 60 dBA Ldn shows that existing traffic noise from Redwood Road results in a noise level, at project locations close to Redwood Road, that exceeds the standard set for normally acceptable noise levels for single-family residential units.

City of Oakland General Plan. The City of Oakland has indicated the goal of preventing or reducing exposure to excessive or annoying noise. Policies relating to noise include the following:

- The city urges other governmental agencies at all levels, as well as private firms and organizations, to make vigorous, coordinated efforts to combat excessive or annoying noise.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE Ldn OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL-LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL-MULTI FAMILY						
TRANSIENT LODGING- MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

INTERPRETATION



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

SOURCE: State Department of Health, Office of Noise Control, Feb. 1976



earth metrics



SCALE

**FIGURE 3.9-1 STATE OF CALIFORNIA
NOISE STANDARDS**

- The city will make every effort to do its own part in noise control and reduction. As appropriate, this will include improvements in circulation design and control; improvements in land use and other regulations; and review of the city's own activities, such as street work and street sweeping, to ensure that noise therefrom has been reduced to the lowest feasible levels.
- Exterior noise levels in each section of Oakland should be restricted or eventually reduced to levels which are compatible with the types of land uses located there. As soon as practicable, the city will develop more specific noise level standards for each type of area.
- To the maximum extent feasible, new or expanded traffic ways through or adjoining areas containing park or recreational uses should be planned to minimize their noise impact on such uses.

IMPACTS

Standard of Significance. Any new residential project that is exposed to a sound level exceeding the 60 Ldn land use capability level as stated in the state standards is significantly impacted. Project-generated impact of three dBA or more which would result in sound levels of 60 Ldn or greater at neighboring residential receptors would be considered a significant impact.

3.9-A. Construction Noise. Substantial noise for a temporary period will be generated by construction activity and vehicles. Noise from the operation of paving machines, trucks, and other construction equipment would increase ambient levels during the construction period.

Typical noise levels of the following construction equipment, as experienced by the human ear at 50 feet and expressed in dBA, are as follows: dump trucks, 88; portable air compressors, 81; concrete mixers, 85; pile drivers, 101; jackhammers, 88; bulldozers, 87; pavers, 89; pneumatic tools, 85; refuse trucks, 90; and backhoes, 85 (EPA, 1971). Noise levels will decrease with distance and be attenuated by obstructions such as buildings or walls. Construction noise will be temporary, and the severity of the impact will depend on the duration of activity.

3.9-B. Motor Vehicle Noise Impact. The ambient noise levels that will be created by post project vehicular traffic were calculated using projected traffic volumes and in accordance with procedures of the Federal Highway Administration (1978). Noise levels perceived by sensitive receptors in the area of the project site adjacent to Redwood Road will increase by less than one dBA due to the project. This would not be considered a significant impact since the increase is less than 3 dBA.

The sound levels due to project traffic will increase from 62 Ldn to 63 Ldn for proposed project residences within 70 feet of the Redwood Road centerline. The sound levels due to cumulative traffic conditions will increase from 62 to 64 Ldn for project residences within 70 feet of the Redwood Road centerline (see Table 3.9-1). This is considered a significant impact requiring mitigation measures to reduce exterior and interior noise levels. Soundlevels

TABLE 3.9-1. EXISTING AND PREDICTED SOUND LEVELS, Ldn

LOCATION	EXISTING LEVEL	FUTURE SOUND LEVEL WITH PROJECT	CUMULATIVE SOUND LEVEL	SOUND LEVEL LIMIT
Along Redwood Road at the site, at a distance of 70 feet from the roadway center line	62	63	64	60
Source: CERTIFIED/Earth Metrics, 1992.				

are normally reduced three to six dBA for each doubling of the distance from the roadway centerline. Residences beyond 70 feet from Redwood Road would experience an Ldn below 60 for both the exterior and interior as a result of distance from the road and shielding by other homes. This would be consistent with the noise standards.

MITIGATION MEASURES

The following mitigation measures are designed to reduce the significant adverse impacts identified previously to less-than-significant levels, unless otherwise indicated:

3.9-A. Construction Noise

- All construction vehicles and equipment should be properly muffled. California State Noise Standards for Delivery Motor Vehicles should be met.
- Construction operations and related travel in the vicinity of the project site to and from the construction area should be limited to the hours of 7:30 A.M. through 6:00 P.M., Monday through Saturday.
- The public should be informed of proposed construction time lines to minimize potential annoyance related to construction noise. This is important for residences located within a few hundred feet of construction activity.

3.9-B. Vehicular Noise Impacts

- Mechanical ventilation should be provided for homes within 70 feet of the center line of Redwood Road. This would permit the residents to maintain operable windows in a closed condition.

- Exterior doors should be 1.75-inch solid core doors with perimeter seals.
- All frames and seals should be thoroughly caulked and weatherstripped to prevent air leaks.
- All roof/wall and floor/wall junctions should be thoroughly sealed and caulked.
- Solid fencing eight feet high above the finished grade, installed along the property line contiguous with Redwood Road, would shield those rear yards adjacent to Redwood Road and mitigate the significant noise impacts. Fencing along Redwood Road would introduce a visual impact along what is currently a scenic corridor. Alternatively, residences can be designed with shielded patios to mitigate for noise impacts in portions of rear yards, which would be counter to the applicant's objective to maximize view opportunities to residents of the site. This is a significant unavoidable impact of the project as it is currently designed.

Modification of the site plan to include a 70-foot buffer between the Redwood Road centerline and rear yards would be an alternative mitigation measure for noise impacts in rear yards.

4. ALTERNATIVES TO THE PROPOSED PROJECT

The California Environmental Quality Act (CEQA) Guidelines require that an EIR describe a range of reasonable alternatives to the proposed project. They also require that the No Project Alternative and its impacts be evaluated, and that the discussion focus on alternatives capable of eliminating any significant adverse environmental effects, or reducing them to a level of insignificance, even if the alternatives would impede, to some degree, the attainment of project objectives, or would be more costly.

For this EIR, three alternatives will be analyzed: (1) No Project Alternative, (2) Reduced Scale Alternative, and (3) Mitigated Alternative. In addition, one alternative site for the proposed project will be discussed.

Per CEQA Guidelines 15126(d), "the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed." The following discussion of significant impacts by each alternative is based on a reasoned chain of events that can be deduced from the detailed study provided in Section 3 of this EIR.

4.1 NO PROJECT ALTERNATIVE

The No Project Alternative assumes no changes in the project site's existing uses. Under the No Project Alternative, no further development of the site is considered and it would remain open space. Under the No Project Alternative, the East Bay Regional Park District could continue to pursue the potential for purchase of the property for inclusion in the regional parks district. In consideration of the significant unmitigable impacts, if the project is implemented as proposed, the No Project Alternative is considered the environmentally superior alternative. Views of the site from public view corridors such as Redwood Road and Redwood Regional Park would be unaltered from their current natural park-like state. The No Project Alternative would not add to the cumulative increase in traffic on Redwood Road nor at the intersection of Redwood Road and Skyline Boulevard. No improvements would be required along Redwood Road to allow access to the project site. There would be no cutting or filling of the natural topography of the site and no construction related erosion impacts. There would be no increase in sediment loading in the west branch of Redwood Creek. Existing natural drainage corridors would remain unaltered. There would be no increased urban runoff introduced into the drainage system and Redwood Creek nor would there be the potential for a significant catastrophic spill to originate from the project site and enter the drainage system.

Vegetation would not be cleared from the project site including oak woodland, bay laurel, and other native trees given priority for preservation by the City of Oakland. Wildlife species would not be displaced from the project site since habitat value would not be altered. The native population of steelhead rainbow trout that use the west branch of Redwood Creek for spawning habitat would not be affected by potential siltation of the creek or water quality impacts originating from the project site.

As traffic would remain unchanged there would be no increase in noise from automobiles and no sensitive receptors would be placed on the project site.

There would be no increased demand for services such as sewer, water, schools, police, and fire.

4.2 REDUCED SCALE ALTERNATIVE

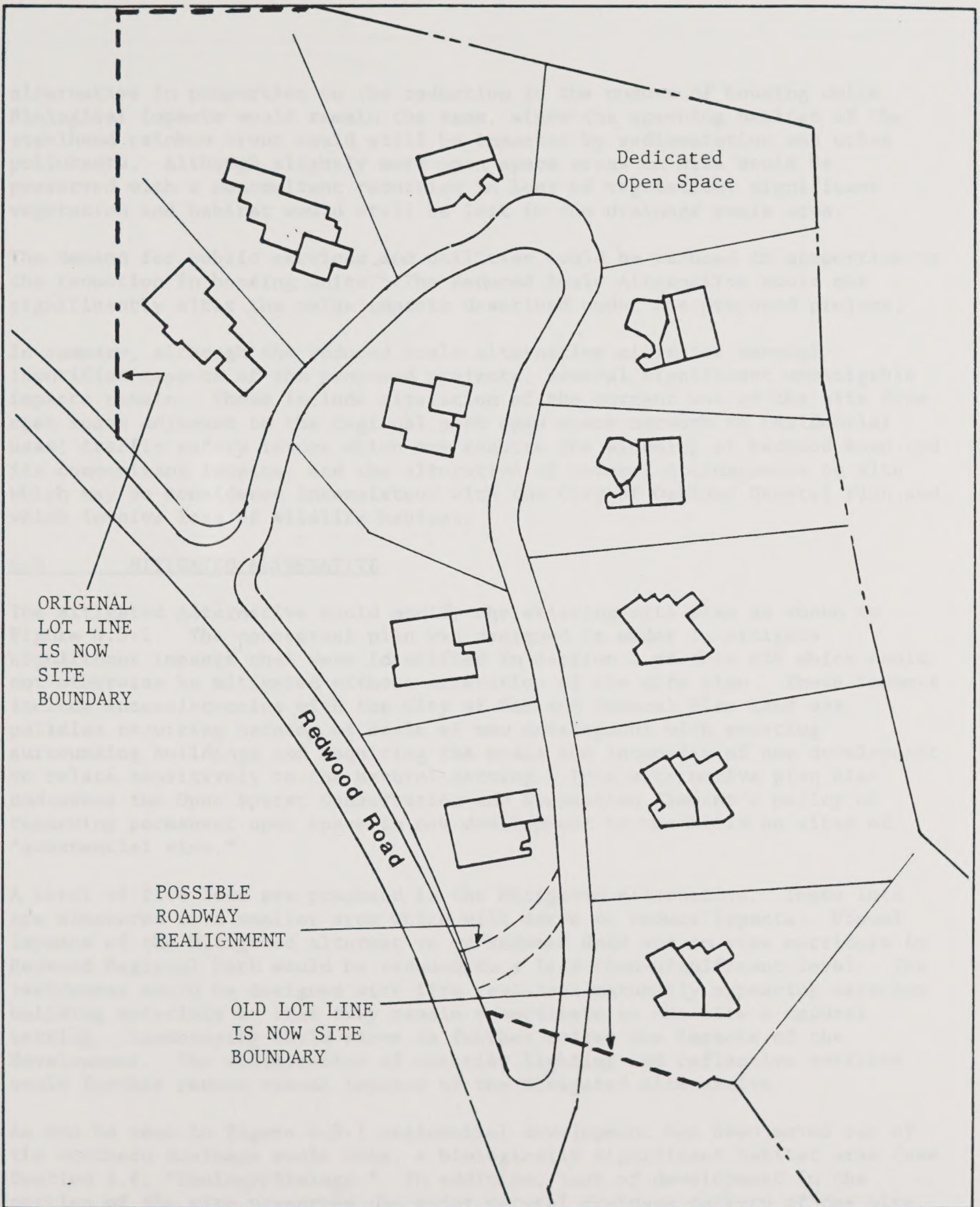
The Reduced Scale Alternative would modify the existing site plan as shown in Figure 4.2-1. Twelve residential units would be eliminated in this scenario in order to reduce the visual impact which is fully discussed in Section 3.2, "Visual/Aesthetics" and can be seen in plates 4b, 5b and 6b of Figure 3.2-1. The units suggested for removal are planned for Lots 1, 4, 6, 7, 10, 12, 13, 16, 17, 20, 21, and 23. Reducing the scale of the project will allow greater flexibility for complying with the lot size requirements in the Oakland Municipal Code for Hillside Subdivisions and with the General Plan guidelines. Reducing the number of units can have two effects: Spaces will be opened up between buildings and, if existing vegetation is left or careful replanting is done, these natural areas will serve to soften the effect of the introduction of buildings on the hillside. Secondly, the reduction in the number of residential units and lots may allow for modifications in architectural design of the remaining units. With more road frontage available, selected units may not need to be "stepped up" on the hillside as much and may be designed with a more lateral orientation with respect to the roadway, with a resultant reduction in height. Open space areas should be left on lots to reduce the visual impact and a "walled in" effect should be avoided if homes are laterally oriented.

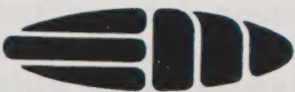
The Reduced Scale Alternative would be more consistent with General Plan land use policies regarding harmony of scale with existing surrounding buildings and scale and intensity of new development relating sensitively to the natural setting; however, some significant differences between the intensity of this development and the intensity of existing development on Redwood Road in the project area would remain.

Under this reduced scale alternative, both lot line adjustments would still be required; the northern one in order to provide adequate lot size for the most northwestern residential unit; and the southern lot line adjustment in order to maintain the roadway as proposed.

Due to the reduction in density of the residences, visual impacts of the reduced scale alternative as viewed from public view corridors would be reduced particularly if there is adequate vegetative screening. However, since the northern intermittent drainage would still be altered for the project residences and roadway, visual features of the site would be impacted. In terms of traffic, vehicular trips generated by the project would be reduced in proportion to the number of residential units removed from the proposed project. Since the access road in the project alternative remains in the same location as for the proposed project, impacts related to visibility at the intersection of the access road exit onto Redwood Road remain the same, as do traffic flow impacts related to southbound Redwood Road as a result of vehicles seeking to turn left into the project entrance.

Geological and hydrological impacts related to erosion and creek sedimentation would remain a concern, although depending on the redesign of structures areas of cut, may be slightly reduced. Urban runoff would also be reduced in this



 earth metrics	 SCALE	FIGURE 4.2-1 CONCEPTUAL SITE PLAN FOR REDUCED SCALE ALTERNATIVE
--	--	--

alternative in proportion to the reduction in the number of housing units. Biological impacts would remain the same, since the spawning habitat of the steelhead rainbow trout could still be impacted by sedimentation and urban pollutants. Although slightly more open space areas on-site would be preserved with a concomitant reduction in loss of vegetation, significant vegetation and habitat would still be lost in the drainage swale area.

The demand for public services and utilities would be reduced in proportion to the reduction in housing units. The Reduced Scale Alternative would not significantly alter the noise impacts described under the proposed project.

In summary, although the reduced scale alternative mitigates several identified impacts of the proposed projects, several significant unmitigable impacts remain. These include alteration of the current use of the site from open space adjacent to the regional park open space network to residential uses; traffic safety issues which may require the widening of Redwood Road and its concomitant impacts; and the alteration of natural drainageways on site which may be considered inconsistent with the City of Oakland General Plan and which involve loss of wildlife habitat.

4.3 MITIGATED ALTERNATIVE

The Mitigated Alternative would modify the existing site plan as shown in Figure 4.3-1. The conceptual plan was designed in order to mitigate significant impacts that were identified in Section 3 of this EIR which could not otherwise be mitigated without alteration of the site plan. These impacts include inconsistencies with the City of Oakland General Plan land use policies requiring harmony of scale of new development with existing surrounding buildings and requiring the scale and intensity of new development to relate sensitively to the natural setting. This alternative plan also addresses the Open Space, Conservation and Recreation Element's policy of reserving permanent open space in new development in the Hills on sites of "substantial size."

A total of five lots are proposed in the Mitigated Alternative. These lots are clustered in a smaller area which will serve to reduce impacts. Visual impacts of the Mitigated Alternative on Redwood Road and on view corridors in Redwood Regional Park would be reduced to a less-than-significant level. The residences would be designed with fire resistant naturally appearing exterior building materials so that they remain subordinate to the site's natural setting. Landscaping could serve to further soften the impacts of the development. The minimization of exterior lighting and reflective surfaces would further reduce visual impacts of the Mitigated Alternative.

As can be seen in Figure 4.3-1 residential development has been moved out of the northern drainage swale area, a biologically significant habitat area (see Section 3.6, "Ecology/Biology." In addition, lack of development in the portion of the site preserves the major natural drainage pattern of the site. The Mitigated Alternative designates an area as "open space" including a buffer zone south of the intermittent stream, the intermittent stream, and areas north of the intermittent stream to the site boundary. Open space in this area reduces visual impacts from distant public view corridors as well as

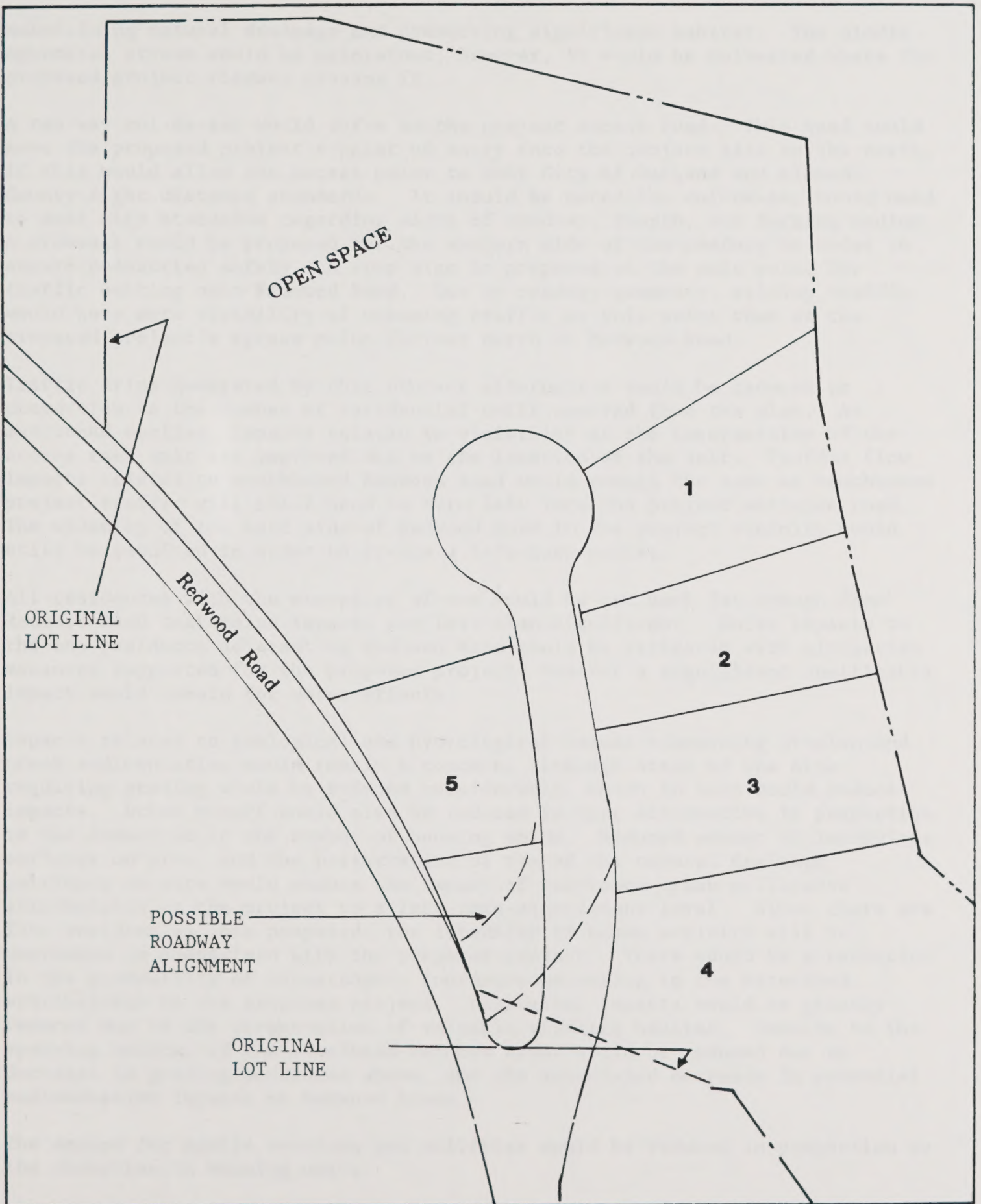


FIGURE 4.3-1 CONCEPTUAL SITE PLAN FOR THE MITIGATED ALTERNATIVE

maintaining natural drainage and preserving significant habitat. The middle ephemeral stream would be maintained; however, it would be culverted where the proposed project roadway crosses it.

A two-way cul-de-sac would serve as the project access road. This road could move the proposed project's point of entry into the project site to the north, if this would allow the access point to meet City of Oakland and Alameda County sight distance standards. It should be noted the cul-de-sac would need to meet city standards regarding width of roadway, length, and turning radius. A sidewalk would be proposed for the eastern side of the roadway in order to ensure pedestrian safety. A stop sign is proposed at the exit point for traffic exiting onto Redwood Road. Due to roadway geometry, exiting traffic would have more visibility of oncoming traffic at this point than at the proposed project's egress point further north on Redwood Road.

Traffic trips generated by this project alternative would be reduced in proportion to the number of residential units removed from the plan. As mentioned earlier, impacts related to visibility at the intersection of the access road exit are improved due to the location of the exit. Traffic flow impacts related to southbound Redwood Road would remain the same as southbound project traffic will still need to turn left into the project entrance road. The widening of the east side of Redwood Road in the project vicinity would still be required in order to create a left-turn pocket.

All residences with the exception of one would be set back far enough from Redwood Road that noise impacts are less-than-significant. Noise impacts to the one residence adjacent to Redwood Road could be mitigated with mitigation measures suggested for the proposed project; however a significant unmitigable impact would remain for noise effects.

Impacts related to geological and hydrological issues concerning erosion and creek sedimentation would remain a concern, although areas of the site requiring grading would be reduced considerably, which in turn would reduce impacts. Urban runoff would also be reduced in this alternative in proportion to the reduction in the number of housing units. Reduced amount of impervious surfaces on site, and the preservation of two of the natural drainage corridors on site would reduce the impact of increased urban pollutants attributable to the project to a less-than-significant level. Since there are five residential lots proposed, the intensity of human activity will be decreased in comparison with the proposed project. There would be a reduction in the probability of catastrophic incidents occurring in the watershed attributable to the proposed project. Biological impacts would be greatly reduced due to the preservation of valuable wildlife habitat. Impacts to the spawning habitat of the steelhead rainbow trout would be reduced due to decrease in grading mentioned above, and the associated decrease in potential sedimentation impacts on Redwood Creek.

The demand for public services and utilities would be reduced in proportion to the reduction in housing units.

The "No Project Alternative" has been identified as the environmentally superior alternative: CEQA Guidelines (15126d) require that if the



SCALE

FIGURE 4.4-1 ALTERNATIVE SITE LOCATION

environmentally superior alternative is the "No Project Alternative," the EIR shall also identify an environmentally superior alternative among the other alternatives. The Mitigated Alternative would be considered the environmentally superior alternative since it mitigates most of the proposed project's significant unmitigable impacts to a less-than-significant level.

4.4 ALTERNATIVE SITE

An equivalently sized, undeveloped property with R-30 zoning within the City of Oakland was identified for the purposes of an alternative site analysis. The alternative site is a privately owned 5-acre parcel located near the intersection of Leona Street and Russell Avenue (see Figure 4.4-1) in the City of Oakland. It is situated on a steeply sloped hill above Interstate 580 (I-580) and near the Mills College Campus. A 32-unit residential subdivision had previously been proposed for this site; however, the environmental review process has not been completed at this time.

Similar to the proposed project, due to the steep uphill topography, extensive grading of the site would be required resulting in major changes in the topography and in the drainage patterns. The alternate site is located one-quarter mile above the Alquist-Priolo Special Studies zone which is an area designated as being particularly sensitive to earthquake hazards. The hilly topography and proximity to the Special Studies zone may make it particularly vulnerable to earthquake hazards.

The site is very visible to motorists on I-580 and from certain areas of the Mills College Campus. Development of the site would significantly change the visual character of the currently undeveloped hillside. Because of this, the use of this alternative site would not resolve visual impacts identified with the proposed project. Development of the alternate site would require removal of oak woodland vegetation, a habitat of significant wildlife value. In addition, the alternate site includes potential Alameda whipsnake habitat, as does the proposed site.

Development of the alternate site would require improvements to Russell Avenue, currently a dedicated unpaved 40-foot-wide public right-of-way being used as a fire trail since the site is not serviced by existing streets. Development of this site would generate additional traffic on Leona Street since this road is the only means of connecting the development to other streets in the immediate vicinity, unless alternate means of access are developed.

5. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ASSESSMENTS

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Section 3 of this Environmental Impact Report (EIR) identifies potentially significant environmental effects of the proposed project. In most cases, the implementation of recommended mitigation measures will minimize impacts to less-than-significant levels. The following impacts of the proposed project remain significant after the implementation of recommended mitigation measures, however, and thus are significant environmental effects which cannot be avoided if the project is implemented as proposed.

LAND USE AND PLANNING

The proposed project would alter the current use of the site from open space adjacent to the regional park open space network to residential.

The project, if implemented as currently proposed, is not considered to be consistent with City of Oakland General Plan land use policies requiring harmony of scale with existing surrounding buildings and requiring the scale and intensity of new development to relate sensitively to the natural setting. It is also not consistent with the Open Space and Conservation policy of requiring the designation of open space areas on sites of substantial size (see Section 3.1, "Land Use and Planning" for a complete discussion of these impacts.) The General Plan inconsistencies can be mitigated with modifications in the site plan such as those described in the "Mitigated Alternative," Section 4.3, including reduction in density and scale of residences and the provision of open space areas and avoiding sensitive view corridors including eliminating development in the northern drainage swale.

Six of the proposed project lots are smaller than the minimum 8,000 square feet required in hillside subdivision according to the Oakland Municipal Code (OMC, Section 7-4.54). Several of the lots are inconsistent with the minimum width requirement of 60 feet at the front building line (OMC, Section 7-4.54). Several residences exceed the building height limitations of the zoning code. Lack of conformance with the Oakland Municipal Code for hillside subdivisions can only be mitigated through redesign of the site plan to conform to city requirements. Lack of conformance with height requirements can be mitigated with redesign of residences.

VISUAL

The project, if implemented as currently proposed, would significantly adversely change the natural visual environment of the hills as viewed from important public view corridors such as Redwood Regional Park and Redwood Road (see Section 3.2, "Visual/Aesthetics" for a complete discussion of these impacts. Visual impacts of the project can be mitigated with alterations in the site plan, such as those mentioned above under "Land Use and Planning" and described in Section 4.3, "Mitigated Alternative."

TRAFFIC AND PARKING

The inadequate sight distance for stopping for southbound traffic traveling on Redwood Road can be mitigated by widening a portion of Redwood Road in the vicinity of the project entrance and providing a left-turn pocket. It is recommended that the project applicant in consultation with the City of Oakland traffic engineer and the County of Alameda traffic engineer explore the feasibility of widening the east side (project side) of Redwood Road only. If this is not feasible and the west side of Redwood Road needs to be widened to mitigate this impact, there would be significant impacts to the biological resources of Redwood Creek depending on the extent of the alternations. If it is determined that the widening of Redwood Road is infeasible or the roadway entrance point is not relocated, significant unmitigable impacts to traffic safety would remain. In addition, widening of Redwood Road would itself be a significant impact to grading, visual, and neighborhood character if not to Redwood Creek.

HYDROLOGY/DRAINAGE/WATER QUALITY

More intense human activity, such as that proposed for the site, leads to greater probability of catastrophic incidents occurring in the mostly undeveloped watershed. Over time, these catastrophic incidents and urban pollutants attributable to the project will combine to have a long-term impact on water quality, which may result in loss of important aquatic species such as the sensitive rainbow trout species. Mitigation measures suggested in Section 3.5, "Hydrology/Drainage/Water Quality," can reduce water quality impacts to Redwood Creek from activities in the project site, they cannot however reduce the impact of potential catastrophic events associated with more intense human activity in the creek vicinity. These catastrophic events are expected to cumulatively have a significant adverse impact on the water quality and aquatic species of Redwood Creek that is unmitigable.

The project design currently requires the alteration of the natural drainage patterns of the site. In particular, alteration of the northern intermittent stream would constitute a significant adverse impact to local vegetation and wildlife. This drainage alteration may also be considered inconsistent with the City of Oakland General Plan policy which states that to the maximum extent feasible, new urban development should be designed to incorporate the natural drainage pattern.

ECOLOGY/BIOLOGY

Biological impacts of the project and project inconsistency with this General Plan policy cannot be mitigated without site plan modification such as those described in the mitigated alternative.

NOISE

The proximity of homes to Redwood Road means residences are subject to noise levels above recommended standards (60 CNEL). Mitigation of closed window

conditions is contradictory to the applicant's goals. Noise levels are considered significant and unmitigable.

5.2 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT

California Environmental Quality Act (CEQA) Section 15126(g) defines growth-inducing impacts as those ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth such as the expansion of wastewater treatment facilities or existing community service facilities. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project is considered to be growth-inducing if it fosters significant economic or population growth, removes obstacles to growth, or stimulates the construction of new housing. A project that stimulates measured and deliberate growth may cause fewer adverse environmental impacts than ones which promote rapid and unregulated growth.

Extending urban services into a previously unserved area, or establishing major new employment opportunities are typically considered to be growth-inducement indicators. If the proposed project would set a precedent by obtaining a zoning variance to build more densely than current zoning would allow, it might also be viewed as growth-inducing. Population and economic growth may tax a community's service facilities and infrastructure.

Temporary jobs generated during the construction of the proposed project are not of a scale or duration to cause local population growth. The proposed project will result in 23 residential housing units. The residential land use to be developed would not necessarily stimulate growth, since the project site has been designated in the General Plan as residential and it has been zoned for residential development. It is also adjacent to developed residential areas to the east.

Although utilities and infrastructure will be extended into the project area, these facilities will not be extended into currently unserved areas outside the project area. A new roadway, with ingress and egress to Redwood Road, would be extended through the site; however, previously unserved areas outside of the project area boundaries will not be served by new infrastructure.

In order to mitigate the impact of inadequate sight distance for safe stopping for southbound traffic approaching southbound cars waiting to make a left-hand turn into the project entrance, the widening of Redwood Road near the project entrance to provide a left-turn pocket was recommended. This is not considered to be growth-inducing since it would involve only limited widening of the road adjacent to the project site. It does not remove obstacles to growth nor does it serve previously unserved areas outside of the project area with new infrastructure. However, it does change the land use of the canyon and may encourage additional annexations and extensions of the urban envelope along the Redwood Road corridor.

5.3 CUMULATIVE IMPACTS

Cumulative impacts are impacts which are individually or incrementally minor, but which, when combined with impacts associated with past and present approved projects and other reasonably anticipated future projects, accumulate to more substantial proportions. The CEQA states that cumulative impacts shall be discussed when they are significant, and that the discussions shall describe the severity of the impacts and the likelihood of their occurrence. CEQA also states that the discussion does not need to provide as great detail as is provided for the project alone. The discussion is to be guided by the standards of particularity and reasonableness.

This Draft EIR discusses cumulative impacts in a number of ways. The land use analysis evaluates comprehensive long-range land use planning goals and policies of the General Plan which are inherently cumulative. The traffic study analyzes specific projects that are considered to be "planned" or foreseeable, and noise impacts are based on cumulative traffic assumptions. CEQA (15130) states that the EIR can discuss cumulative impacts in one of two ways, or both:

- a) Use a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or,
- b) Use a summary of projections contained in an adopted General Plan or related planning document which is designed to evaluate regional or areawide conditions.

For the purposes of this EIR, a list of reasonably foreseeable projects is used to identify cumulative impacts. The following projects are currently proposed or are under consideration and are included in the cumulative land use scenario:

- a) Montebello Terrace Subdivision - 70 single-family residential units.
- b) Oakland Hills Tennis Club Expansion.
- c) Oak Knoll Vista Estates - 46 single-family residential units.
- d) Redwood Road Athletic Club.
- e) Oak Crest - 32 single-family residential units and town houses.

Individual technical sections in Section 3 of this EIR discuss cumulative impacts, particularly those impacts of increased traffic levels on area roadways, the consequent noise and air quality impacts of cumulative traffic levels, and the ability to provide adequate services.

5.4 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity is often one of trade-offs or a balancing of social, economic, and environmental impacts over time. In some cases, a relatively short-term benefit may have adverse cumulative

effects, with the possibility that future generations and the future economy may be burdened with unwarranted social and environmental costs. The opposite situation, in which long-term benefits occur at the expense of short-term impacts, is also possible.

The Mayer Heights residential development would replace existing open space land with urban development. This would limit the potential of the site for future natural and other uses, permanently reduce the amount of open space in the vicinity, and alter the semi-rural character of lands in the Redwood Canyon. The project site has no significant agricultural potential except as cattle grazing land due to its size, topography, and soil constraints, and containment by existing ridgetop residential development. The location and characteristics of the project site give it significant parkland and open space potential which would be permanently altered by development.

The principal beneficial effects of the proposed project would be to increase local housing opportunities in the Oakland Hills area and increase the city's population base.

5.5 EFFECTS FOUND NOT TO BE SIGNIFICANT

Based on the Initial Study (Appendix A) performed by the City of Oakland, some environmental issues were found not to be significant and therefore were determined not to require analysis. Issues which are considered not to be significant for purposes of this EIR include the following: cultural resources, public health, and energy.

6. REFERENCES: ORGANIZATIONS, PUBLICATIONS AND PERSONS CONSULTED

Alameda Contra Costa Transit Service, telephone communication (1992).

Alameda County Urban Runoff Clean Water Program, Storm Water Management Plan for Alameda County, Urban Runoff Clean Water Program Final Draft (1991).

Alexander, Pete, Fisheries Biologist, East Bay Regional Parks District, personal communication (1991).

Alfors, John, California Division of Mines and Geology, personal communication (1991).

American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets (1990).

Barbour, M.G., and J. Major, Terrestrial Vegetation of California (1977).

Barrett, R., Mammals of California Oak Habitats - Management Implications, presented at the Symposium on the Ecology, Management, and Utilization of California Oaks, Claremont, California (1979).

Bay Area Air Quality Management District, Air Quality and Urban Development: Guidelines for Assessing the Impacts of Projects and Plans (1985).

Bay Area Air Quality Management District, Air Quality Handbook (1989-1990).

Beeman, Gary, Wildlife Biology Consultant and Herpetologist, telephone communication (1990).

Bellman, Lynn, Planning Division, City of Oakland Police Department, telephone communication (1991).

Bowyer, Dale, Regional Water Quality Control Board, telephone communication (1992).

Brockman, C.F., Trees of North America (1968).

Burt, W.H., and R.P. Grossenheider, A Field Guide to the Mammals (1976).

California, State of, Air Resources Board, 1987 Emissions Inventory (1990).

California, State of, Air Resources Board, Annual Data Summaries (1987 through 1989).

California, State of, Air Resources Board, California Surface Wind Climatology (1984).

California, State of, Air Resources Board, URBEMIS3 Project Vehicle Emissions Computer Model (1990).

California Department of Fish and Game, Alameda Whipsnake: Five Year Status Report (1987).

California Department of Fish and Game, California Natural Diversity Database, Oakland East 7.5 Minute Quadrangle (1987).

California Department of Transportation (CALTRANS) Traffic Volume (1991).

California Native Plant Society, Inventory of Rare and Endangered Vascular Plants of California (1988).

Collins, Gary, Inspector, City of Oakland Fire Department, telephone communication (1991).

Collins, Ken, Acting Senior Public Works Supervisor, Oakland Sanitation Department, telephone communication (1990).

Collins, Michele, Analyst, School Facilities Planning Division, California Department of Education, telephone communication (1990).

Crittenden, M., Trees of the West (1977).

Division of Mines and Geology, Geologic Map of California (1977).

East Bay Municipal Utility District, Draft Project Report of the Non-Point Source Monitoring Program for the San Pablo, Briones, and Upper San Leandro Watersheds 1990-1991 (1991).

East Bay Regional Parks District, Rainbow Trout Information Placard, Redwood Regional Park (1991).

EIP Associates, Oak Crest Draft Environmental Impact Report (1991).

EIP Associates, Oakland Hills Tennis Club Expansion Draft Environmental Impact Report (1988).

EIP Associates, Redwood Road Athletic Club Draft Environmental Impact Report (1985).

Gabby, Phillip, Senior Dispatcher, City of Oakland Police Department, telephone communication (1991).

Gall, G.A.E., and Boyd Bentley, Genetic Stock Identification Laboratory, Department of Animal Science, University of California, Davis, Genetic Isolation of Steelhead Rainbow Trout in Kaiser and Redwood Creeks, California, California Department of Fish and Game 76(4): 216-223 (1990).

Golden Gate Audubon Society, Checklist of the Birds of the East Bay Region, California (1982).

Griffith, Douglas, Controller, Altamont Landfill, telephone communication (1991).

Grubstick, Phil, City of Oakland Engineering Department, personal communication (1991).

High, Karen, U.S. Army Corps of Engineers, telephone communication (1992).

Holland, R., Ph.D., Vegetation Ecologist, California Department of Fish and Game, Preliminary Descriptions of the Terrestrial Natural Communities of California (1986).

Institute of Transportation Engineers, Trip Generation (1991).

Jones, Randy, Project Architect, Unique Concepts, telephone communication (1991 and 1992).

Kim, Dan, Engineer, East Bay Municipal Utilities District, telephone communication (1991).

Lindenmeyer, Tom, Environmental Specialist, East Bay Regional Park District, telephone communication (1992).

Local Agency Formation Commission, Informational Packet (1991).

Long, Robert, Office of Planning, Oakland Unified School District, telephone communication (1991).

LSA Associates, Inc., Montebello Terrace Subdivision Final Environmental Impact Report (1988).

LSA Associates, Inc., Oak Knoll Vista Estates Draft Environmental Impact Report (1990).

McGowan, William, East Bay Municipal Utilities District, telephone communication (1991).

McGinnis, Samuel, Biological Consultant, Status of the Alameda Whipsnake (*Masticophis masticophis lateralis*) on a 5.6 Acre Parcel on Redwood Road, Oakland, California (1992).

Miller, Warren, Engineer, Pacific Bell Telephone Company, telephone communication (1990).

Munz, Philip, A California Flora and Supplement (1959).

Muzar, Robert, Police Captain, City of Oakland Police Department, telephone communication (1991).

NiDana, Robin, Planning Department, City of Oakland, telephone communication (1992).

Nordmo Associates, Preliminary Report, Geotechnical Investigation, Proposed 23-lot Subdivision, Redwood Road, Oakland, California (1991).

Oakland, City of, Environmental Hazards Element - An Element of the Oakland Comprehensive Plan (1974).

Oakland, City of, Land Use - An Element of the Oakland Comprehensive Plan (1980).

Oakland, City of, Noise - An Element of the Oakland Comprehensive Plan (1974).

Oakland, City of, Oakland Policy Plan (1980).

Oakland, City of, Open Space, Conservation and Recreation - An Element of the Oakland Comprehensive Plan (1976).

Olorunsogo, Ade, Traffic Engineer, City of Oakland, telephone communication (1991).

Owen, David, Water Systems Unit, East Bay Municipal Utilities District, telephone communication (1992).

Palmisano, Terry, Wildlife Biologist, California Department of Fish and Game, telephone communication (1992).

Peterson, Roger Tony, A Field Guide to Western Birds (1961).

Preston, Robert, Traffic Engineer, Alameda County (1992).

Seeburger, Robert, General Manager, Altamont Landfill, telephone communication (1991).

Simmons, LaVerne, Project Engineer, MSD Engineering, telephone communication (1991 and 1992).

Sloan, David, Business Representative, Pacific Gas and Electric, telephone communication (1991).

Stebbins, R.C., A Field Guide to Western Reptiles and Amphibians (1966).

Sullivan, Vern, City of Oakland Engineering Department, personal communication (1991).

Transportation Research Board, Highway Capacity Manual, Special Report No. 209 (1985).

Transportation Research Board, Highway Capacity Manual, TRB Special Report 209 (1985).

Tsuda, Tom, Associates Transportation Engineer, California Department of Transportation, telephone communication (1992).

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Alameda Area, California (1966).

U.S. Environmental Protection Agency, Compilation of Air Pollutant Emission Factors, AP-42 (Fourth Edition) (1985).

U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances (1971).

U.S. Federal Highway Administration, FHWA Highway Traffic Noise Prediction Model and Nomograph FHWA-RD-77-108 (1978).

U.S. Geological Survey, Oakland East, California 7.5 minute topographic quadrangle, 1959 (photorevised 1968 and 1973).

Wlassowsky, Vladimir, Engineer, Road Planning and Design, City of Oakland, telephone communication (1991).

Woodward-Clyde Consultants, Executive Summary of the Alameda County Urban Runoff Clean Water Program Loads Assessment Summary Report, submitted to the Alameda County Flood Control and Water Conservation District (1991).

7. PREPARERS OF THIS REPORT

This report was prepared by CERTIFIED/Earth Metrics of Brisbane, California. CERTIFIED/Earth Metrics has no financial interest whatsoever in the approval or disapproval of the proposed project.

The CERTIFIED/Earth Metrics staff who participated in this project are as follows:

Gary Deghi, M.S., Senior Vice President, Principal-in-Charge

Naomi J. Sims, Ph.D., Project Manager

Steven M. Moore, B.S., Environmental Analyst

Chris Sanchez, B.S., Air Quality Scientist

Mario Sternad, B.S., Environmental Scientist

Ballard W. George, M.A., Acoustical Engineer

Paul Awosika, M.Sc., Environmental Scientist

Patricia Caswell, B.A., Environmental Analyst

Robert Erving, B.A., Environmental Analyst

Diane Pittenger, Production Manager

Caesar Jhanapin, Graphics

8. APPENDICES

- A. Initial Study
- B. Letters in Response to the Notice of Preparation
- C. Lot Data and Architectural Drawings of Proposed Residences
- D. Supporting Traffic Data
- E. Geotechnical Investigation (Nordmo Associates, Inc.)
- F. Alameda Whipsnake Site Survey (Dr. Samuel McGinnis)
- Fl. Biologist Qualifications and Study Methodology

1. On 11/11/71, the New York City Police Department (NYPD) advised that a 2.5 acre site in the 24 single family residential zone located on the west side of the street known as "The Green" is being offered for sale. The site is located on the west side of the street known as "The Green" and is bounded by the street known as "The Green" on the north, the street known as "The Green" on the south, the street known as "The Green" on the east, and the street known as "The Green" on the west. The site is located on the west side of the street known as "The Green" and is bounded by the street known as "The Green" on the north, the street known as "The Green" on the south, the street known as "The Green" on the east, and the street known as "The Green" on the west.

2. On 11/11/71, the New York City Police Department (NYPD) advised that a 2.5 acre site in the 24 single family residential zone located on the west side of the street known as "The Green" is being offered for sale. The site is located on the west side of the street known as "The Green" and is bounded by the street known as "The Green" on the north, the street known as "The Green" on the south, the street known as "The Green" on the east, and the street known as "The Green" on the west.

APPENDIX A

INITIAL STUDY

Item	Description	Yes	No	Not Applicable
1.	Is the site located in a residential zone?			
2.	Is the site located in a residential zone?			
3.	Is the site located in a residential zone?			
4.	Is the site located in a residential zone?			
5.	Is the site located in a residential zone?			
6.	Is the site located in a residential zone?			
7.	Is the site located in a residential zone?			
8.	Is the site located in a residential zone?			
9.	Is the site located in a residential zone?			
10.	Is the site located in a residential zone?			
11.	Is the site located in a residential zone?			
12.	Is the site located in a residential zone?			
13.	Is the site located in a residential zone?			
14.	Is the site located in a residential zone?			
15.	Is the site located in a residential zone?			
16.	Is the site located in a residential zone?			
17.	Is the site located in a residential zone?			
18.	Is the site located in a residential zone?			
19.	Is the site located in a residential zone?			
20.	Is the site located in a residential zone?			
21.	Is the site located in a residential zone?			
22.	Is the site located in a residential zone?			
23.	Is the site located in a residential zone?			
24.	Is the site located in a residential zone?			
25.	Is the site located in a residential zone?			
26.	Is the site located in a residential zone?			
27.	Is the site located in a residential zone?			
28.	Is the site located in a residential zone?			
29.	Is the site located in a residential zone?			
30.	Is the site located in a residential zone?			

INITIAL STUDY
California Environmental Quality Act

- I. **DESCRIPTION OF THE PROJECT** The applicant proposes to subdivide a 5.8 acre site into 24 single family residential lots for development of 23 houses served by a private street located on the east side of Redwood Road, 1,000 feet north of Skyline Blvd. in the R-30 One-Family Residential Zone.
- II. **DESCRIPTION OF THE ENVIRONMENTAL SETTING** 5.8 acre site adjacent to Oakland - Alameda County line, uphill slope from Redwood Road with stands of Oak and Eucalyptus trees; single family residential uses to east; Redwood Regional Park to west.

III. ENVIRONMENTAL EFFECTS

Geophysical. Will the proposal result in:

1. Unstable earth conditions, including erosion or slides, or changes in geologic substructures either on or off the site?
2. Major changes in topography or ground surface relief features?
3. Construction on loose fill or other unstable land which might be subject to slides or liquefaction during an earthquake?
4. Construction within one quarter mile of an earthquake fault?
5. Substantial depletion of a nonrenewable natural resource or inhibition of its extraction?

Air and Water. Will the project result in:

6. Substantial air emissions, deterioration of ambient air quality or the creation of objectionable odors?
7. Substantial degradation of water quality?
8. Changed drainage patterns or increased rates or quantities of surface water runoff?
9. Interception of an aquifer by cuts or excavations?

Fish and Wildlife. Will the project:

10. Reduce the quantity of fish and wildlife in the project vicinity, interfere with migratory or other natural movement patterns, degrade existing habitats or require extensive vegetation removal?
11. Reduce the numbers of any rare or endangered species of plants or animals?

Land Use and Socio-Economic Factors. Will the project:

12. Conflict with approved plans for the area or the Oakland Comprehensive Plan?
13. Carry the risk of an explosion or the release of hazardous substances, including oil, pesticides, chemicals or radiation?
14. Require relocation of residents and/or businesses?
15. Cause a substantial alteration in neighborhood land use, density or character?
16. Generate substantially increased vehicular movement or burden existing streets or parking facilities?
17. Elicit substantial public controversy or opposition?
18. Have a substantial impact on existing transportation systems or circulation patterns?
19. Result in a substantial increase of the ambient noise levels for adjoining areas?
20. Impose a burden on public services or facilities including fire, solid waste disposal, police, schools or parks?
21. Impose a burden on existing utilities including electricity, gas, water, and sewers?
22. Destroy, deface or alter a structure, object, natural feature or site of historic, architectural, archeological or aesthetic significance?
23. Involve an increase of 100 or more feet in the height of any structure over any previously existing adjacent structure?

<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>Source or Explanation</u>
<u>X</u>			<u>See attachment</u>
<u>X</u>			" "
	<u>X</u>		" "
		<u>X</u>	
		<u>X</u>	
		<u>X</u>	
		<u>X</u>	
<u>X</u>			<u>See attachment</u>
<u>X</u>			<u>See attachment</u>
	<u>X</u>		" "
		<u>X</u>	
		<u>X</u>	
<u>X</u>			<u>See attachment</u>
	<u>X</u>		" "
	<u>X</u>		" "
		<u>X</u>	
		<u>X</u>	
		<u>X</u>	
		<u>X</u>	<u>See attachment</u>
		<u>X</u>	
		<u>X</u>	

Issue: Will the project:

Yes Maybe No Source or
Explanation

14. Use or encourage use of substantial quantities
of fuel or energy?

— — X —

IV. MANDATORY FINDINGS OR SIGNIFICANCE (EIR required if answer to any of the following
questions is "yes" or "maybe".)

Yes Maybe No

a. Does the project have the potential to degrade the
quality of the environment, substantially reduce
the habitat of a fish or wildlife species, cause a
fish or wildlife population to drop below self-
sustaining levels, threaten to eliminate a plant
or animal community, reduce the number or restrict
the range of a rare or endangered plant or animal
or eliminate important examples of the major
periods of California history or prehistory?

X — — See attachment

b. Does the project have the potential to achieve short-
term, to the disadvantage of long-term, environmen-
tal goals? (A short-term impact on the environment
is one which occurs in a relatively brief, definitive
period of time while long-term impacts will endure
well into the future.)

X — — See attachment

c. Does the project have impacts which are individually
limited, but cumulatively considerable? (A project
may impact on two or more separate resources where
the impact on each resource is relatively small, but
where the effect of the total of these impacts on
the environment is significant.)

X — — See attachment

d. Does the project have environmental effects which
will cause substantial adverse effects on human
beings, either directly or indirectly?

— — X

If any "yes" or "maybe" answers are marked, describe the specific nature of the
environmental effects involved and their relationship to the project. (Use an attached
sheet if necessary.)

V. DETERMINATION:

On the basis of this initial evaluation:

☐ I find the proposed project WILL NOT have a significant effect on the
environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect
on the environment, there will not be a significant effect in this case
because the mitigation measures described on an attached sheet have been
added to the project. A NEGATIVE DECLARATION will be prepared.

☒ I find the proposed project MAY have a significant effect on the environ-
ment, and an ENVIRONMENTAL IMPACT REPORT is required.

For: S. Chaney-Williamson

Date: September 25, 1990

Title: Assistant Planner

~~2376344~~
2376344

ATTACHMENT TO INITIAL STUDY

III. ENVIRONMENTAL EFFECTS

Geophysical, Air and Water

Item #1: The site currently exhibits erosion damage which resulted from previous improper grading activity in the drainage swale. Additional erosion, and slide damage, could occur from (a) construction of the homes on steep, uphill topography (b) construction of retaining walls; and (c) removal of vegetation for home construction.

Items #2 and #8: The proposal involves the construction of a private road about 900 feet long, and 23 single family houses. This major topography changes; in altered drainage patterns; and in possibly increased surface water runoff within this watershed area. As the proposal involves constructing the private street over the existing drainage swale, major changes to existing drainage patterns would result from this action, also. The applicant estimates that the project will include more than 10,000 cubic yards of grading.

Item #3: According to the Soil and Geologic Investigation* prepared for a previous 4-lot subdivision proposal, the site is located next to the presumed inactive Chabot Fault to the south, and is within one mile of the active Hayward Fault Zone southwest. The report warns that the design of the proposed homes should take these features into account to minimize the effects of strong ground shaking.

BIOTIC

Items #10 and #11: The site is located in proximity to Redwood Creek. This creek is recognized as a habitat for the Steelhead Rainbow Trout, which is a genetically pure strain of trout that has State Historical Landmark status. Because the site's drainage pattern empties indirectly into the creek, sediment and other construction debris could be carried into the creek, covering the gravel area where the trout eggs are stored. For this reason, the project has the potential to degrade an existing habitat, and to reduce the quantity of an important fish.

Also, the project's sponsor indicates Oak trees are present on the site. As Oaks are protected under the City's Tree Ordinance, the project has the potential for reducing important vegetation.

LAND USE AND SOCIO-ECONOMIC FACTORS

Item #15: The visual impact of the 23 proposed houses would cause a substantial alteration to the existing wooded neighborhood character.

Item #16: Redwood Road is currently only 20 feet wide. While much of the project-related circulation activity would occur on private property within the proposed private road, some importance to Redwood Road may be necessary to accommodate the additional potential traffic load. In addition, emergency access may be difficult given the steepness and configuration of the proposed roadway.

Item #17: The East Bay Regional Park District and the City's Office of Public Works both expressed concerns related to the previously proposed project's potential significant impact on the creek, and grading, respectively. The project may elicit substantial public controversy or opposition for these reasons, and because of the site's visibility and proposed single family home construction.

Item #21: The project would involve construction of new sewer, water, and storm drain lines, which would mostly run under the proposed private streets. The water and sewer lines would be extended from their present termini about 425 feet south of the site on Redwood Road. The storm drains would empty into the creek on the opposite side of Redwood Road.

IV. MANDATORY FINDINGS OF SIGNIFICANCE:

Item 'a': Refer to items #10, #11 (Biotic) above.

Item 'b' and 'c': Because of the potential impacts in respect to (1) extensive grading and erosion damage on steep, uphill topography; (2) extensive roadway and house construction; (3) altered drainage patterns; (4) vegetation removal; (5) possible endangerment to an animal community; (6) alteration of the neighborhood's visual character; (7) traffic circulation; and (8) public controversy, the project has the potential to achieve short-term, to the disadvantage of long-term environmental goals, and has impacts which may be individually limited but cumulatively considerable.

ER 90-75

RECEIVED

APPENDIX B

LETTERS IN RESPONSE TO THE NOTICE OF PREPARATION

TO: receiving agency

RE: CITY OF OAKLAND PLANNING DEPARTMENT'S NOTICE OF PREPARATION FOR DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE
HAYES WILDS
SCH # 3104105

Attached for your comment is the City of Oakland Planning Department's Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Hayes WILDS.

Responsible agencies must submit their comments and concerns to the City of Oakland Planning Department, focusing on specific information related to their own statutory responsibility, within 15 days of receipt of this notice. We encourage commenting agencies to respond to this notice and press their concerns early in the environmental review process.

Please direct your comments to:

EVELYN CRANE-WILLIAMS
CITY OF OAKLAND PLANNING DEPARTMENT
ONE CITY HALL PLAZA
OAKLAND, CA 94612

With a copy to the Office of Planning and Research. Please refer to the EIR number noted above in all correspondence concerning this project.

If you have any questions about the review process, call the Bureau at (415) 443-4612.

Sincerely,


David C. Rosenberg
Deputy Director, Permit Assistance

Enclosures

Lead Agency

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
400 TENTH STREET
SACRAMENTO, CA 95814



ER 90-75

RECEIVED

DATE: Jun 25, 1991

TO: Reviewing Agency

RE: CITY OF OAKLAND PLANNING DEPARTMENT's NOP for
MAYER HEIGHTS
SCH # 91063068

PLANNING COMMISSION
JUN 28 1991

Attached for your comment is the CITY OF OAKLAND PLANNING DEPARTMENT's Notice of Preparation of a draft Environmental Impact Report (EIR) for the MAYER HEIGHTS.

Responsible agencies must transmit their concerns and comments on the scope and content of the EIR, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

SYLVIA CHANEY-WILLIAMSON
CITY OF OAKLAND PLANNING DEPARTMENT
ONE CITY HALL PLAZA
OAKLAND, CA 94612

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call Ken Button at (916) 445-0613.

Sincerely,

A handwritten signature in dark ink, appearing to read "David C. Nunenkamp".

David C. Nunenkamp
Deputy Director, Permit Assistance

Attachments

cc: Lead Agency

S = sent by lead agency

X = sent by SCH

Resources Agency

☐ Karen Cagle
Dept. of Boating & Waterways
1629 S Street
Sacramento, CA 95814
916/445-6281

☐ Gary L. Holloway
California Coastal Commission
631 Howard Street, 4th Floor
San Francisco, CA 94105
415/543-8555

☐ Reed Holderman
State Coastal Conservancy
1330 Broadway, Suite 1100
Oakland, CA 94612
415/464-1015

☐ Dennis O'Bryant
Dept. of Conservation
1416 Ninth Street, Room 1326-2
Sacramento, CA 95814
916/322-5873

☐ Div. of Mines and Geology

☐ Div. of Oil and Gas

☐ Land Resources Protect. Unit

☐ Douglas Wickizer
Dept. of Forestry
1416 Ninth Street, Room 1516-2
Sacramento, CA 95814
916/322-0128

☐ Hans Kreutzberg
Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001
916/322-9621

☒ Mike Doyle
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001
916/324-6421

☐ Anna Leena Bronson
Reclamation Board
1416 Ninth Street Room 706
Sacramento, CA 95814
916/322-3740

☒ Nancy Wakeman
S.F. Bay Conservation & Dev't Comm.
30 Van Ness Avenue, Room 2011
San Francisco, CA 94102
415/557-3686

☒ Nadell Gayou
Dept. of Water Resources
1416 Ninth Street, Room 449
Sacramento, CA 95814
916/445-7416

Fish and Game - Regional Offices

☐ Gary Stacey, Regional Manager
Department of Fish and Game
601 Locust
Redding, CA 96001
916/225-2300 (8-412)

☐ Jim Messersmith, Regional Manager
Department of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
916/355-0922 (8-438)

☒ B. Hunter, Regional Manager
Department of Fish and Game
P.O. Box 47
Yountville, CA 94599
707/944-5518

☐ G. Nokes, Regional Manager
Department of Fish and Game
1234 East Shaw Avenue
Fresno, CA 93710
209/222-3761 (8-421)

☐ Fred A. Worthley, Jr., Reg. Manager
Department of Fish and Game
330 Golden Shore, Suite 50
Long Beach, CA 90802
213/590-5113 (8-635)

Independent Commissions

☐ John R. Nuffer
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814
916/323-9180

☒ William A. Johnson
Native American Heritage Comm.
915 Capitol Mall, Room 288
Sacramento, CA 95814
916/322-7791

☐ George Hersh
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/557-1375 (8-597)

☒ Betty Eubanks
State Lands Commission
1807 - 13th Street
Sacramento, CA 95814
916/322-2795

Business, Transportation, & Housing

☐ Sandy Heanard
Caltrans - Division of Aeronautics
P.O. Box 942874
Sacramento, CA 94274-0001
916/324-1833

☐ Sgt. Jim Weddell
California Highway Patrol
Long Range Planning Section
Planning and Analysis Division
2555 First Avenue
Sacramento, CA 95818
916/445-1981

☐ Ron Helgason
Caltrans - Planning
P.O. Box 942874

**Department of Transportation
District Contacts**

☐ Jo Sanford
Caltrans, District 1
1656 Union Street
Eureka, CA 95501
707/445-6671 (8-538)

☐ Michelle Gallagher
Caltrans, District 2
1657 Riverside Drive
Redding, CA 96001
916/225-3259 (8-442)

☐ Brian J. Smith
Caltrans, District 3
703 B Street
Marysville, CA 95901
916/741-4277 (8-457)

☒ Gary S. Adams
Caltrans, District 4
P.O. Box 7310
San Francisco, CA 94120
415/557-9162 (8-597)

☐ Jerry Laumer
Caltrans, District 5
P.O. Box 8114
San Luis Obispo, CA 93403-8114
805/549-3161 (8-629)

☐ Moses Pacheco
Caltrans, District 6
P.O. Box 12616
Fresno, CA 93778
209/276-5989 (8-422)

☐ Gary McSweeney
Caltrans, District 7
120 South Spring Street
Los Angeles, CA 90012
213/620-2376 (8-640)

☐ Harvey Sawyer
Caltrans, District 8
247 West Third Street
San Bernardino, CA 92403
714/383-4808 (8-670)

☐ Andy Zellman
Caltrans, District 9
500 South Main Street
Bishop, CA 93514
619/872-0693 (8-627)

☐ Al Johnson
Caltrans, District 10
P.O. Box 2048
Stockton, CA 95201
209/948-7838 (8-423)

☐ Jim Cheslbro
Caltrans, District 11
P.O. Box 85406
2829 Juan Street
San Diego, CA 92138-5406
619/237-6755 (8-631)

☐ Chuck Edmon
Caltrans, District 12
2501 Pullman St.
Santa Ana, CA 92705
714/724-2061 (8-655)

Food and Agriculture

☐ Vashek Cervinka
Dept. of Food and Agriculture
1220 N Street, Room 104
Sacramento, CA 95814
916/322-5227

Health & Welfare

☐ Quy Tu
Dept. of Health
714 P Street, Room 1253
Sacramento, CA 95814
916/323-6111

☐ DISTSCD: _____

State and Consumer Services

☐ Robert Sleppy
Dept. of General Services
400 P Street, Suite 3460
Sacramento, CA 95814
916/324-0214

Environmental Affairs

☒ Barbara Fry
Air Resources Board
1102 Q Street
Sacramento, CA 95814
916/322-8267

☐ Jeannie Blakeslee
Calif. Waste Management Board
1020 Ninth Street, Room 300
Sacramento, CA 95814
916/327-0454

State Water Resources Control Board

☐ Allan Patton
State Water Resources Control Board
Division of Clean Water Programs
P.O. Box 944212
Sacramento, CA 94244-2120
916/739-4414

☐ Dave Berlinger
State Water Resources Control Board
Delta Unit
P.O. Box 2000
Sacramento, CA 95810
916/322-9870

☐ Ed Anton
State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95801
916/445-9552

☐ Mike Falkenstein
State Water Resources Control Board
Division of Water Rights
901 P Street
Sacramento, CA 95814
916/324-5636

☒ APCD/AQMD: Alameda

Regional Water Quality Control Board

☐ NORTH COAST REGION (1)
1440 Guerneville Rd.
Santa Rosa, CA 95401
707/576-2220 (8-590)

☒ SAN FRANCISCO BAY REGION (2)
1800 Harrison Street, Suite 700
Oakland, CA 94612
415/464-1255 (8-561)

☐ CENTRAL COAST REGION (3)
1102-A Laurel Lane
San Luis Obispo, CA 93401
805/549-3147 (8-629)

☐ LOS ANGELES REGION (4)
101 Center Plaza Drive
Monterey Park, CA 91754
213/266-4460 (8-640)

☐ CENTRAL VALLEY REGION (5)
3443 Rautier Road, Suite A
Sacramento, CA 95827-3098
916/361-5600

☐ Fresno Branch Office
3614 East Ashlan Avenue
Fresno, CA 93726
209/445-5116 (8-421)

☐ Redding Branch Office
415 Knollcrest Drive
Redding, CA 96002
916/224-4845 (ATS 441)

☐ LAHONTAN REGION (6)
2092 Lake Tahoe Boulevard
Suite #2
South Lake Tahoe, CA 96150
916/544-3481

☐ Victorville Branch Office
15428 Civic Drive, Suite 100
Victorville, CA 92392-2359
619/241-6583

☐ COLORADO RIVER BASIN
REGION (7)
73-271 Highway 111, Suite 21
Palm Desert, CA 92260
619/346-7491

☐ SANTA ANA REGION (8)
6809 Indiana Avenue, Suite 200
Riverside, CA 92506
714/782-4130 (8-632)

☐ SAN DIEGO REGION (9)
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1331
619/265-5114 (8-636)

☐ OTHER: _____

☐ OTHER: _____

15 Bell Waver Way
Oakland, Ca 94619
June 30, 1991

RE: Mayer Heights

Ms. Sylvia Chaney-Williamson
Oakland City Planning Department
City Hall
One City Hall Plaza
Oakland, CA 94612

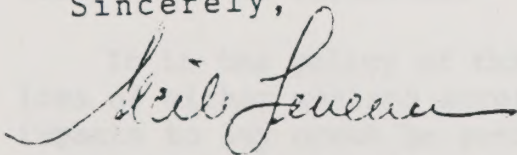
Dear Ms. Chaney-Williamson:

Let me react to the proposed erection of 23 family houses on 5.8 acres on the east side of Redwood Road. I have been a resident of the Balmoral houses for some two years now. During my residence here, I regularly observe deer, red fox and other animals grazing, hunting and feeding off the steep canyon slope beneath my home.

I have very strong reservations about seeing a development go up on the proposed site. Besides wildlife conservation, I am concerned that earth disturbance on this very steep slope may cause land-slide problems. And the necessary destruction of the eucalyptus trees lining the canyon will cause severe updrafts resulting in a significant fire hazard to the area.

Instead of becoming a single family housing site, I would like to encourage the city of Oakland to buy the parcel as part of its regional park expansion program, preserving the peaceful and uninterrupted expanse of woods and meadows.

Sincerely,



Cecile Leneman

RECEIVED

JUL 15 1990

PLANNING COMMISSION
ZONING DIVISION

DEPARTMENT OF FISH AND GAME

POST OFFICE BOX 47

YOUNTVILLE, CALIFORNIA 94599

(707) 944-5500

July 26, 1991

RECEIVED



JUL 30 1991

PLANNING COMMISSION
ZONING DIVISION

Ms. Sylvia Chaney-Williamson
City of Oakland Planning Department
One City Hall Plaza
Oakland, California 94612

Dear Ms. Chaney-Williamson:

Mayer Heights, Notice of Preparation (NOP)
Oakland, Alameda County, SCH# 91063068

Department of Fish and Game personnel have reviewed the NOP for the Mayer Heights project. The project proposes 24 lots on a 5.8-acre site.

The draft Environmental Impact Report (DEIR) should contain a complete description of the vegetation on site, including a map showing the location of the habitat types and any streams or creeks. It should also contain a map(s) showing the relationship of this project to Redwood Creek in terms of location and hydrology. Impacts to the habitats as a result of the project, and mitigation measures necessary to offset those impacts, should be identified and discussed.

Of particular importance will be any direct or indirect impacts to Redwood Creek since this is a major spawning tributary for trout in the Upper San Leandro Reservoir. This population has been determined by U. C. Davis genetics specialists to be a genetically distinct population of rainbow trout. A discussion of impacts should include altered hydrology, sedimentation and water quality impacts from additional housing. Proposed mitigation should include a detailed discussion of erosion control measures.

Secondary impacts to the creek from proposed mitigation measures should also be included. For example, if mitigation for traffic impacts proposes widening Redwood Road, then any impacts from the road widening on the creek should also be discussed.

It is the policy of this Department that a project should cause no net loss of either wetland acreage or wetland habitat value. We recommend that impacts to any creek be avoided where possible. Impacts would include road crossings, culverts, or fill. Impacts which are unavoidable should be identified and mitigation provided for in the document. Any vegetation removed along a creek should be replaced on a 3:1 in-kind basis using native species.

This Department recommends a minimum 100-foot buffer, measured outward from the top of each creek bank, be established in order to protect any creek and its vegetation, and to provide a travel corridor for wildlife. No roads, buildings, or yards should be constructed within this buffer area.

Any work within the banks of a creek, including road crossings and culverts, will require a streambed alteration agreement with this Department. The Department has direct jurisdiction under Fish and Game Code

Ms. Sylvia Chaney-Williamson
July 26, 1991
Page Two

sections 1601-03 in regard to any proposed activities that would divert or obstruct the natural flow or change the bed, channel or bank of any stream. We recommend early consultation since modification of the proposed project may be required to avoid impacts to fish and wildlife resources. Formal notification of proposed channel modifications under Fish and Game Code Section 1603 should be made after all other permits and certifications have been obtained. Work cannot be initiated until a streambed alteration agreement is executed.

The U. S. Army Corps of Engineers also has jurisdiction over the discharge of fill to streams under Section 404 of the Clean Water Act. If work is to be done in a creek, we recommend the Corps be notified to determine if they have jurisdiction and require a permit.

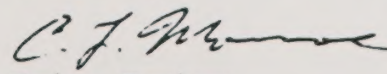
Surveys should be conducted for any rare, threatened or endangered species which may exist on site. Wildlife listed as species of special concern, and plants listed by the California Native Plant Society (CNPS) should be included. The Department's Natural Diversity Data Base (NDDB) should be consulted for any known site-specific occurrences and for a list of species found in the general area. A report from the NDDB which lists no findings for the project site does not indicate these species do not exist there, only that no information is in the file. Surveys should be conducted at the proper time of year to locate any identified species. Impacts to these species and their habitats should be avoided. Impacts which are unavoidable should be identified and appropriate mitigation provided.

The DEIR should include a map of adjacent properties showing any open space areas. Areas to be retained as open space on site should not be completely encircled by development as this decreases the value of the area for wildlife. We recommend open space areas on and off site be connected to one another by corridors to permit wildlife passage between the areas.

Survey results and mitigations to avoid or reduce impacts must be included in the document. Surveys to be conducted at a later time, or mitigation measures to be identified at some future time, are not acceptable. It has been determined in a court ruling that such studies and mitigation measures would be improperly exempted from the process of public and governmental scrutiny which is required under the California Environmental Quality Act (CEQA). A document which requests future studies or future identification of mitigation will be considered inadequate.

Department personnel are available to address our concerns in more detail. To arrange a meeting, please contact Ms. Terry Palmisano, Associate Wildlife Biologist, at (415) 484-2586; or Mr. Larry Week, Associate Fishery Biologist, at (707) 944-5526.

Sincerely,


For Brian Hunter
Regional Manager
Region 3

5749 Balmoral Drive
Oakland, Ca. 94619
August 3, 1991

Sylvia Chaney-Williamson
Oakland City Planning Department
City Hall
One City Hall Plaza
Oakland, ca. 94612

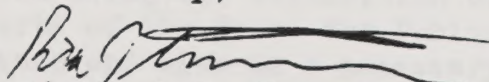
Re: Case Number ER 90-75

Dear Ms. Chaney-Williamson,

I oppose the development of the Mayer Heights site for residential purposes because of the adverse impact it will have on the environment. This proposal would result in increased vehicle traffic which produces air pollution, and more people in the delicate wooded area surrounding the site. Alameda County already has the worst air quality in the Bay area according to the daily weather reports published in the newspaper. Development of this site would facilitate more people and their cars moving into the area thereby exacerbating the situation.

My wife and I moved here three months ago because it was relatively cleaner than many parts of Oakland. The proposed development would undermine our efforts to protect our health. In addition, the encroachment of houses into the wooded area diminishes the protection of the surrounding wildlife. We are doing our part to help protect the environment in general and the immediate area in particular. We hope the City will do the same by avoiding unnecessary construction on the few remaining wilderness areas.

Sincerely,

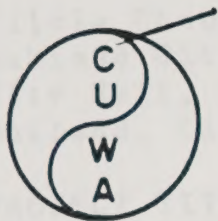

Richard J. Trumm

RECEIVED

AUG 07 1991

PLANNING COMMISSION
ZONING DIVISION

K:\users\jnelson\ER-90-75.jin



CITIZENS FOR URBAN WILDERNESS AREAS
4325 MOUNTAIN VIEW AVE., OAKLAND, CALIFORNIA 94605

August 8, 1991

ADVISORY AND
RESOURCE

Mary L. Bowerman
Helen Burke
Joyce Burr
Paul Couel
Afton Crooks
Lucretia Edwards
J. H. Engbeck, Jr.
Mark Evonoff
Margo Gwinn
Hulet Hornbeck
Mary Lee Jefferds
Harlan Kessel
Sherman Lewis
Daniel Luten
Sylvia McLaughlin
Marian Reeve
Glenn T. Seaborg
Jean Siri
William E. Siri
Margaret Tracy
Barbara Vincent
Susan Watson

Alvin D. James
Director of City Planning
1330 Broadway, Rm. 310
Oakland, CA. 94612

Dear Mr. James:

ER90-75

Because our long term objective is the establishment and protection of natural areas in and near urban centers for their intrinsic educational values Citizens for Urban Wilderness Areas have been much concerned about the proposed Mayer Heights development on Redwood Road adjacent to Skyline Ranch. It has been our understanding that an EIR has been required. However, we consider the preservation of the natural features of the area so important that waiting for an EIR and responding to it simply would be a waste of time.

There is no sensible way to mitigate the environmental damage that would result with the proposed development. The extensive street and house construction of the development on very steep, fragile hillsides would require extensive grading. This would change natural drainage patterns already altered somewhat by ridge development. The result would be serious damage to fish habitats downstream on Redwood Creek where a companion branch of the creek has a specially constructed ladder for the spawning of land-locked steelhead trout that have much interest scientifically in the evolution of trout species. Other important native plant habitats both on hillsides and downstream also would be gravely impaired, some irresparably so.

The area all along Redwood Road below Skyline Ranch should be considered solely for open space and potential parkland in perpetuity simply because of its intrinsic educational values. Negotiations are well along for acquisition of Skyline Ranch by the Regional Park District through efforts of the Trust for Public Land. Mayer Heights is a natural extension from Skyline Ranch and also is a necessary protection of a natural entry into Redwood and Chabot Regional Parks. Any further development along Redwood Road and hills and slopes between Redwood Road and Blythen Way would gravely impair important ecological features and educational values of the adjacent Regional parks. Further, the vast majority of home owners above and adjacent to Mayer Heights oppose the development.

For the several reasons above CUWA strongly urges that development be denied and that the City of Oakland and the East Bay Regional Park District be encouraged to negotiate with the owner for purchase of the property as a parkland addition.

Sincerely,

Roger Reeve, Cor. Sec.

cc - Oakland City Council
COOS
EBRPD

August 19, 1991

RECEIVED

Silvia Chaney-Williamson
Oakland City Planning Department
City Hall, One City Hall Plaza
Oakland, CA 94612

AUG 20 1991

PLANNING COMMISSION
ZONING DIVISION

PROJECT TITLE: Mayer Heights, Case #ER90-75

PROPOSED PROJECT: Subdivision of a 5.8 acre site located
feet north of Skyline Blvd, on the east side of
Redwood Rd. into 24 single family residential lots
for development of 23 houses.

RE: Response to a proposed EIR for the Mayer Heights Project

Dear Ms. Chaney-Williamson:

As a homeowner residing in Hillcrest Highlands and who, therefore, would be directly affected by the Mayer Heights Project, I feel it important to inform the Planning Department of my concerns regarding the proposed new subdivision. The following points are some of the potentially serious problems which I believe need to be specifically addressed in the proposed Environmental Impact Report.

Paramount among these concerns are the effects of extensive grading which would be required on the steep hillside. Removal of the existing vegetation, including protected trees, would make the area increasingly vulnerable to slides particularly because of its close proximity to the Hayward Fault. The eventual return to normal rainfalls and subsequent collapse of steep hillsides must also be considered as these happened frequently prior to the present drought.

In addition to the grading, the extensive private streets and 23 houses would alter drainage patterns, not only for the Mayer site but also for Hillcrest Highlands. The Redwood Canyon would likely bear the brunt of any change in drainage. This factor along with silting resulting from grading would imperil the breeding grounds of the salmo iredei, the endangered species of trout found in the stream running through the Canyon.

Visually, the proposed construction of 23 houses at the entrance of the East Bay Regional Park would neither enhance the beauty nor the tranquility which the park now offers. In addition, the homes in Hillcrest Highlands which overlook the proposed site would not only be adversely affected visually but also would be subject to a significant increase in noise levels as sounds from the Mayer property already carry very clearly across the hillside.

Considering the amount of home construction which has taken place in the hill district recently, traffic problems also could present noticeable congestion. Another consideration must be the Oakland City budget which does not provide for additional fire and police protection despite increased population in the area.

Although the following concerns would not be included in the EIR, I believe they are worthy of the Planning Department's consideration. The first is the overcrowding of the surrounding schools. According to the Montclairian of Friday, August 16, 1991, 8 schools are already closed to additional enrollments and 15 additional schools "are on the verge of

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Barbara Brewster Holcombe

Address:

*12220 Blythen Way
Oakland 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Dr & Mrs Irvin Herman

Address: *5821 Balmoral Rd
Oakland, Ca. 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr. & Mrs. B.A. Valberg
Address:

*5881 Balmoral Dr.,
Oakland, Calif.*

94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr & Mrs Eugene A. Stovall III

Address:

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr & Mrs R. J. Lillie
Address:

27 Bell Waver Way

OAKLAND, CALIF 94619

531-3455

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Niane & Bruce Del Fante

Address:

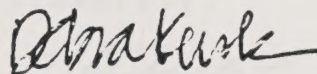
*5793 Balmoral Dr.
Oakland, 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

12133 Tartan Way
Oakland CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Father Blakwell

Address:

*5785 BALMORAL DR.
OAKLAND, CALIF 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Shirley A. Locke

Address:

12160 PLYMOUTH WAY
OAKLAND CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Bob Quinn, homeowner
Address:

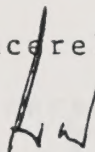
*15 Bell Waver Way
Oakland CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

A handwritten signature in black ink, appearing to be 'LW' or 'LW' with a stylized flourish.

Address:

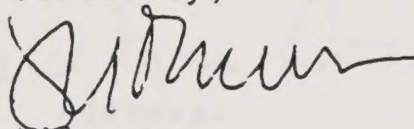
*Leland R. Chew
12171 Blythen Way
Oakland, CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

YONG-YONG TAM M.D.
5880 Balmoral Dr.
Oakland, CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Frank Mrs Arthur Beren

Address:

*12100 Tartan Way
Oakland, Calif.
94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Evelyn + Rudy Peters

Address:

*5786 BALMORAL DR.
OAKLAND, CA. 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Fredrick L. Green

Address:

*12195 Blythen Way
Oakland, Ca 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr. and Mrs. Eric Brenfell

Address:

*12095 Tartan Way
Oakland, CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Pauline L. Erickson

Address:

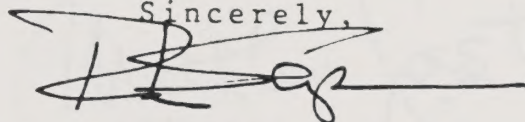
*5780 Balmain Dr.
Oakland, 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Sayre', with a long horizontal line extending to the right.

Address:

ROBERT L. SAYRE
12050 Tartan Way
Oakland, CA 94619

eing closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Matthew Epstein

Address:
MATTHEW EPSTEIN
12120 TANTAN WAY
OAKLAND CA 94619

RECEIVED

PLANNING COMMISSION
ZONING DIVISION

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Patricia Faraghan
Address:

9 BELL WAYER WAY
OAKLAND, CA. 94619

William D. Faraghan III
9 BELL WAYER WAY
OAKLAND, CA. 94619

RECEIVED

AUG 5 1991

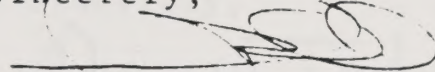
PLANNING COMMISSION
ZONING DIVISION

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



RECEIVED

AUG 5 1991

PLANNING COMMISSION
ZONING DIVISION

Address:

1 Wee Blythemo Wy
OAKLAND CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Doris O. Tabluff

Address:

*42 Shawnee St
Oakland Ca -*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Harriet + Richard Golden

Address:

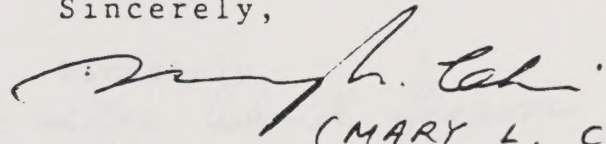
*5833 Balmorel Dr.
Oakland CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,


(MARY L. CHIN)

Address:

5779 BALMORAL DRIVE,
OAKLAND, CA. 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr and Mrs John H. Hearon

Address:

*73 Bell Waver Way
Oakland CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Alan A. Brizer

Address:

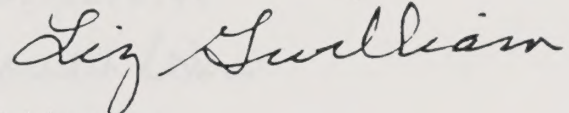
12125 Tartan Way

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

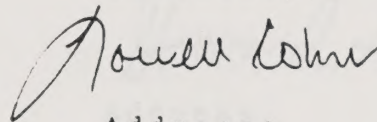
 Mrs. Elizabeth Gwilliam
5751 Balmoral Drive
Oakland, CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

12065 Tartan Wy
Oakland, Ca 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Howard D. Brooke

Address:

*5750 Balmoral Dr
Oakland CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

William R. Montague

Address:

34 SHAWNEE CT
OAKLAND, CA 94619
415-531-8564

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,
James H. Brown

Address:

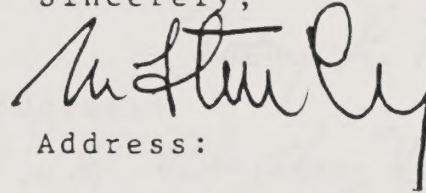
*16 - Shavnee Ct
Oakland, CA
94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

M.M. Sternberg
12101 Tartan Way
Oakland, CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Richard McDonnell
Patsy L. McDonnell

Address:

12181 Blythen Way
Oakland, Ca
94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Barbara + Brian Matthews

Address:

*5870 Balmoral Dr.
Oakland, CA 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mrs Mrs Burton Tolo

Address:

*25 Shawnee Ct
Oakland, Calif 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Carole & Norman Robin

Address:

*1 Bell Waver way
Oakland Ca 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Wong Ho Ro

Address:

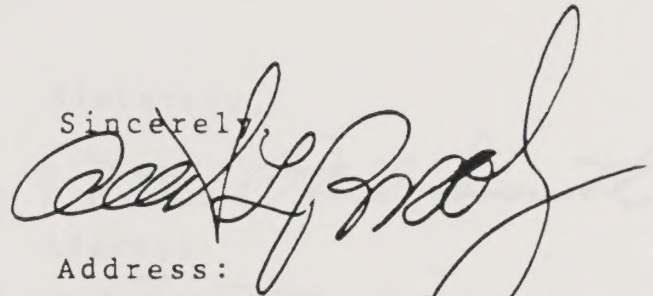
WON HO RO
12131 Blythen Way
Oakland, CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

12070 Tartan Way
Oakland CA 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mr. & Mrs. Phil Smith

Address:

*12079 Tartan Way
Oakland*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Lise Ann Kase

Address:

*5770 Balmoral Dr.
Oak 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Ella Fidler

Address:

*5810 Balmaral Ter
Oakland
Ca 94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Clifton Marshall

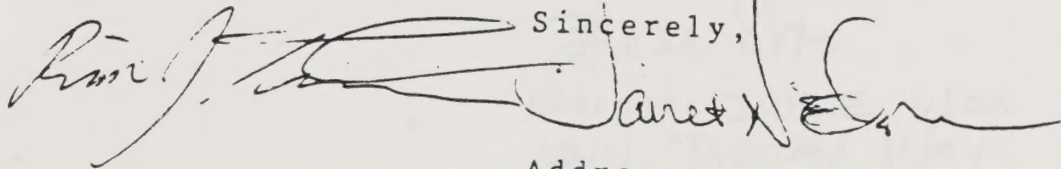
Address:

5830 Balmoral Dr.
Oakland Ca. 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,


Address:

5745 Balmore Drive
Oakland, Ca. 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Irene Woo

Address: IRENE WOO
12111 TARTAN WAY
OAKLAND, CA 94619 .

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

John A. Lynch
Address: (LYNCH)

5799 BALMORAL DR.
OAKLAND, CA. 94619

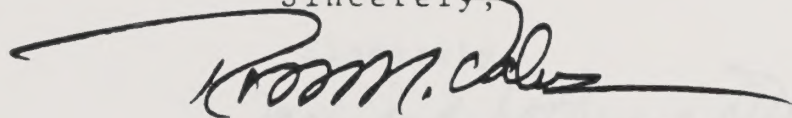
Robert & Lois Valva

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,



Address:

5778. BALMORAL DR -
OAKLAND, CALIF
94619

Robert + Lois Valva

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mary and Katherine D. Munck

Address:

50 Shawnee Court

Oakland CA 94619

ing closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclairion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 10% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Mrs. Elaine Arriago
Address:

*12121-Blythen-Way
Oakland CA
94619*

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public school.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Jawaz + Connie Khosachit

Address:

5792 Balmoral Dr
Oakland, Cal 94619

J

g closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Address:

Personally my family and I do not feel that no development at all of this property is the solution for the properties surrounding Hillcrest Highlands. We have no objections to "single family" homes being built on them, but only feel the R-10 is the only zoning appropriate to this area. Mr. Mayer's proposal is too dense for the 5.8 acres. Perhaps he would be able to scale down his numbers so his development could follow the guidelines of R-10 for a planned community.

Thank you,

Virginia Maffeo

35 Bell Waver Way
Oakland, Ca. 94619

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

A. Maria Gracia

Address: 5815 Balmoral Dr
Oakland, Ca 94619

P. S. In addition, many of us purchased homes in the area because of the beautiful trees and the natural area. The City of Oakland has recently approved developments which have created eyesores - homes which are built with little or no space - Montebello Terrace and the Villas at the corner of Redwood Road/Campus Drive. These developers massacred the land by cutting so many of the trees. It is time the City Council and the Planning Department took a stand to halt the development and save the trees, natural vegetation and animals in the hill area. The beauty of the hills should not be spoilt for a few more homes.

Traffic is also becoming much more congested. 24 homes will add a significant amount of traffic. At commute hours and when Skyline school is in session there is too much traffic and there are likely to be more accidents.

being closed," including Carl Munck which would serve as the elementary school for the Mayer project. One of my neighbors reports that at the beginning of the 1990-91 school year, her child was one of 31 students at Carl Munck who had neither teacher nor classroom until temporary arrangements could be made. The Monclarion also reported that a "recent census" of Oakland shows that within the next 5 years there will be at least a 15% increase in elementary students, most of whom would attend public schools.

The financial capability of the developer must also be considered. It would be a tragic mistake if this development, with all the unforeseen problems associated with building on such a steep hillside, were to be approved only to wind up like the Thornhill project in Montclair; a denuded and blighted eyesore for all and a pleasure for none.

Thank you for your attention to my concerns and I would appreciate being notified of any further developments concerning the proposed Mayer Heights subdivision and its pending EIR.

Sincerely,

Kenneth L. & Marian Thompson

Address: *28 Bell Waver Way*

P.S. We are both very concerned about what this project will do to traffic on Redwood Road from Campus Drive on downhill. Redwood Rd is a 12% grade on which most cars exceed the posted speed limit of 35 MPH. Once Montebello Terraces and Leone Park Villas fill up, it will be a madhouse - especially after 23 more homes come on stream. Please think about this!

K. & M. Thompson

RECEIVED

AUG 26 1971

Oakland Planning Dept
City Hall
Oakland, - Ca 94617

PLANNING COMMISSION
ZONING DIVISION

8-22-91

Re: Leon Moyer
Trotter =
off skyline

att: Sylvia Chouay-Willowson

Greetings:

How long have you lived in Oakland?
I've been here since 1931 !!
Sixty years - thats 60 yrs =

you don't know the problems I've seen -
(you haven't !!) - Now
people are coming along and want
to Destroy the environment - the
streets - Land - Schools -
(I want to tell you about our
schools = they will be over crowded -)

What about our streets - ??
you can't pave them fast enough!
check the POT Holes around here.

Police - Fire Depts - What are
you going to do with more
people & more traffic?
More congestion !!

✓OVEN

Come on - We Dont need any
new Houses here -
look around Oakland -
we have Vacant Bldgs -

More people in than -

We DO Not Need More Noise -
More Pollution

Why Destroy Trees - More
Damage After - over Fill Schools -

If you Dont control this over
Buildings here in Oakland you
are not solving any problem -

How are the present Tax-Payers supposed
to pay for the Streets - Police - Fire
Dept. Services for some self
indulged - Profit oriented - Money
making person that really Dont
Care about Oakland like I do
Ive lived here for 60 years
Where did Oscar Meyer Come from?
Some HOT Dogs should?

MR & MRS L.R. COLEMAN
12110 Tartan Way
Oakland, CA 94619

COOS
a note from JACK MOORADIAN

Dear Silvia Chaney-Williamson,

I have NO objections to
the Mayer Heights proposed
subdivision. I live adjacent
to the property and as a
Balmoral Homeowner's member
I approve of the development.

Jack Mooradian
8-23-91

 J. MOORADIAN
5804 Balmoral Dr.
Oakland, CA
94619-2404



COOS

4325 Mountain View
Oakland, CA 94605

OFFICERS:

Lise Stampfli Torme
President

8 Columbus Ave. Mezzanine
San Francisco, CA 94111
(415) 986-4186

Bill Patterson
Vice-President
5861 Balmoral Drive
Oakland, CA 94619
(415) 530-8431

Roger Reeve
Vice-President
4325 Mountain View Ave.
Oakland, CA 94605
(415) 530-7547

Gerry Zager
Treasurer
7914 Crest Avenue
Oakland, CA 94605
(415) 647-0777

Margo Dishner
Associate Secretary
7035 Pine Haven Road
Oakland, CA 94609

Judy Bank
Associate Secretary
5458 Fernhoff Road
Oakland, CA 94619

Bob Eagle
Associate Secretary
4706 Manilla Avenue
Oakland, CA 94609

Barbara Bowers
Associate Treasurer
12220 Blythen Way
Oakland, CA 94609

Nancy Seidbotham
Associate Treasurer
6375 Hillmont Drive
Oakland, CA 94609

Dan Rust
Membership Coordinator
582 A 61st St.
Oakland, CA 94609

Sylvia Chaney-Williamson
City of Oakland Planning Department
421 14th Street
Oakland, CA 94612

RE: ER 90-75

Dear Ms. Chaney-Williamson,

COOS (Citizens for Oakland's Open Space) has taken a position on the application for subdivision of the 5.8 acre site on Redwood Road north of Skyline Boulevard known as the Mayer Heights Project. COOS feels strongly that the proposed subdivision and project of 23 houses and a 900 foot access road should not under any circumstances be approved or allowed due to great adverse environmental impacts of regional significance.

These include:

1. Grading on the steep slopes of the site would certainly harm fish and wildlife habitat in the Redwood Canyon. *Salmo iridei* a rare species of steelhead trout of State Historical Landmark status spawns in the Redwood Creek and tributaries. The East Bay Regional Park District has long demonstrated an interest in the survival and propagation of this species and has constructed a fish ladder within 3/4 of a mile of the proposed project site. Run off from construction and subsequent siltation of the waters of the creek could greatly damage and degrade the habitat of the creek and threaten survival of this species. Of international significance, *salmo iridei* is being used as genetic stock to repopulate dead streams and lakes in Scandanavia and New Zealand and appropriate sites in California. The importance of preserving its natural habitat and this genetic pool is of great value to environmental planners worldwide. Underestimating the importance of this species and contributing to the degradation of its habitat by poor planning would be a grave error .

2. The East Bay Regional Park District has long had both the Mayer property, contiguous parcels in the canyon area, and the adjacent Skyline Ranch on its Master Plan list of desirable acquisitions for the expansion of the District's Parks. The District is currently in negotiations with Trust for Public Land regarding a joint purchase of the Skyline Ranch. It has committed itself to purchasing the development rights on Skyline, and within the last six months, the District has written the property owners of the Mayer Heights site expressing interest in purchasing this land for park use.

The area north of Skyline Boulevard extending down Redwood Road serves as an open space setting and the "natural entrance to the Redwood Park" and privately owned recreational facilities of the Skyline and Lorimer stables. These stables have for many years served as recreational resources to the region and provide access to the trails and facilities of Joaquin Miller, Redwood, and Chabot Parks. COOS feels strongly that subdivision and development of the Mayer property would severely and adversely impact the character of the area and damage aesthetically the parklike setting, encourage alternative use on contiguous sites and endanger this valuable recreational resource. Existing city residential development presently stops at the stable areas. COOS feels it is fitting that the planning

RECEIVED

AUG 26 1991

PLANNING COMMISSION
ZONING DIVISION

commission preserve this natural boundary and find against the project and subdivision.

3. Other impacts:

Traffic from the proposed development would certainly cause a public safety threat at the crosswalk located directly in front of the Lorimer stable. This is an important access link for trails running east/west along the Skyline center divider and the Huntfield, Joaquin Miller and Redwood Park trails. Increased traffic of any kind would certainly create a hazzard for pedestrians and equestrians.

Extensive grading on the slopes of the Mayer property may also create a danger from slides or erosion for property owners situated above the site. From our regular contact with homeowners in the neighborhoods around the Mayer property I think it is highly likely that there will be great opposition to any development plan on this site.

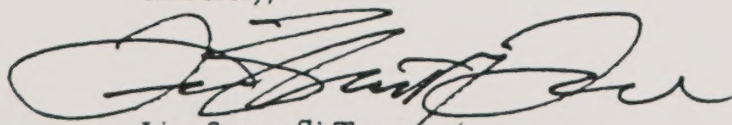
I would also like to go on record with a strong criticism about the manner in which this development proposal was noticed. Very few homeowners in the area were notified of the planned development. COOS feels strongly that the city should notify **all** interested parties and neighbors when a project of this size and impact is brought forward. It was less than 4 years ago that a development plan and annexation request for the Manor Care Senior Home (This is directly contiguous to the Mayer property) was proposed for the Skyline Ranch Property. In the midst of overwhelming public outcry this request and proposal were denied. Many citizens and advocacy groups went on record in protest of Manor Care, and surely some of these should have been noticed about this proposal.

These should be notified about the Mayer Property developments: Balmoral Homeowners, Metropolitan Horsemen's Association, Maydo Lorimer of Lorimer's Stable, Lloyd Graham of Piedmont Stable, Redwood Heights Neighborhood, Urban Creeks Council, Citizens for the Urban Wilderness, Oakland Shoreline Committee, Sierra Club, Audobon Society, Native Plant Society, California Dressage Society, Metropolitan Equestrian Preservation, East Bay Trails Council, EBRPD Park Advisory Committee, EBRPD Foundation, Parks and Recreation Advisory Commission (City of Oakland), Friends of Creeks in Urban Settings, Heritage Trails, and the governing body of the East Bay Municipal Water District.

Please keep our officers informed of any changes in the status of this matter and notify us of any upcoming meetings or hearings on the Mayer property or proposed development. We care greatly about the future of this wild and scenic part of the city.

Thank you for your time and consideration in this matter.

Sincerely,



Lise Stampfli Torme
President, Citizens for Oakland's Open Space

REGIONAL PARKS

BOARD OF DIRECTORS
James H. Duncan, President
Harlan Kessel, Vice President
Mary Lee Jeffords, Secretary
Jocelyn Combs, Treasurer
Oliver Holmes
John O'Donnell
Ted Radtke
Pat O'Brien
General Manager

RECEIVED

SEP 13 1991

CITY PLANNING COMMISSION
ZONING DIVISION

September 3, 1991

Ms. Sylvia Chaney-Williamson
Oakland Planning Department
One City Hall Plaza
Oakland, CA 94612

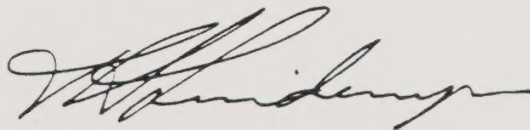
Subject: EIR for Mayer Heights - Redwood R. P.

Dear Ms. Chaney-Williamson:

As we discussed by phone, the EBRPD concerns related to water quality and possible impacts upon the steelhead population of Redwood Creek are reflected in the City's Initial Study for the subject report.

The contact person for this EIR will be the undersigned who may be reached at 531-9300, ext. 2332. Please do not hesitate to call if there is any assistance the District could provide.

Very truly yours,



T. H. Lindenmeyer
Environmental Specialist

THL/wmb



Rec'd
9-24-91

97 Thousand Oaks
Oakland, CA 94605
23 September 1991

Sylvia Chaney-Williamson
Oakland Planning Department
421 14th St.
Oakland, CA 94612

RE:ER 90-75

Dear Ms. Chaney-Williamson:

I am writing in opposition to the proposed Mayer Heights Project at Redwood Road north of Skyline Boulevard. I feel strongly that the proposed subdivision and project of 23 houses and a 900 foot access road should not be approved because of its impact on the environment and character of that area.

As a park user and longtime Oakland resident, as well as a member of Citizens for Oakland's Open Space, I believe that the area north of Skyline Boulevard extending down Redwood Road should be maintained as an open space, parklike gateway to the main entrance of Redwood Park. If this property is developed, it would give the green light to develop other private property down Redwood Road to the park.

There is also, of course, the issue of increased traffic if the Mayer property is developed. The winding, rural road is not meant for heavy traffic.

I would appreciate being informed of meetings and hearings on the Mayer property.

Sincerely,

Helen Lore

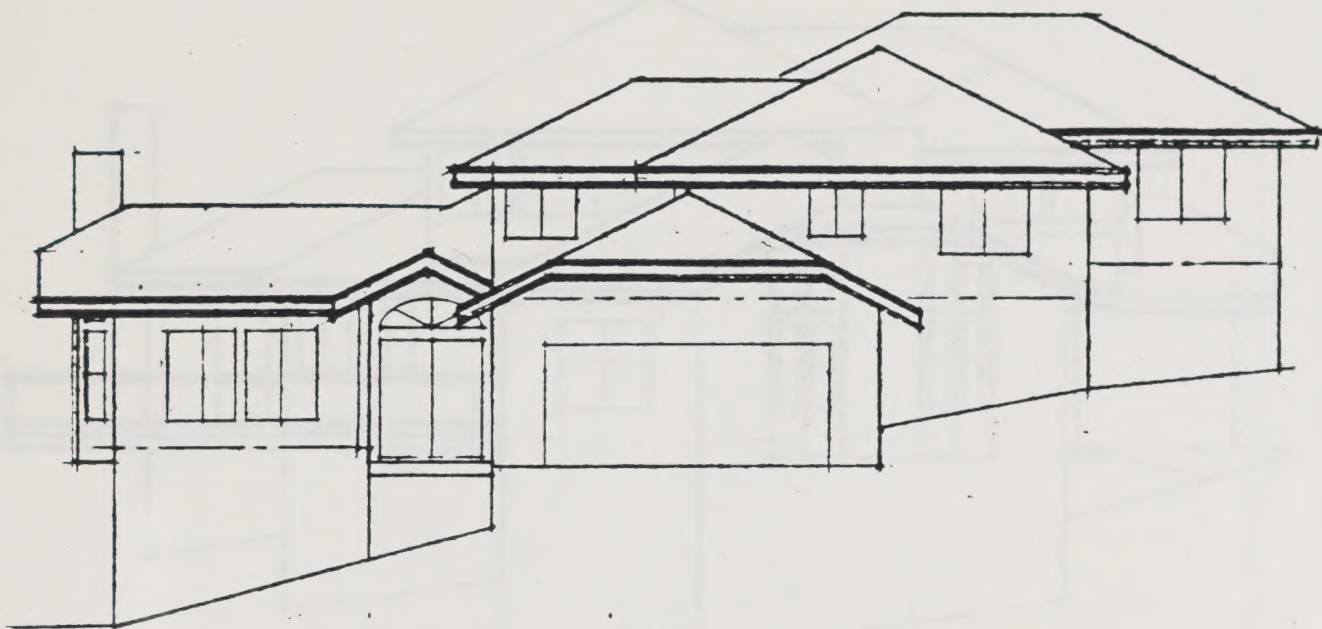
Helen Lore

TABLE C-4. LOT DATA

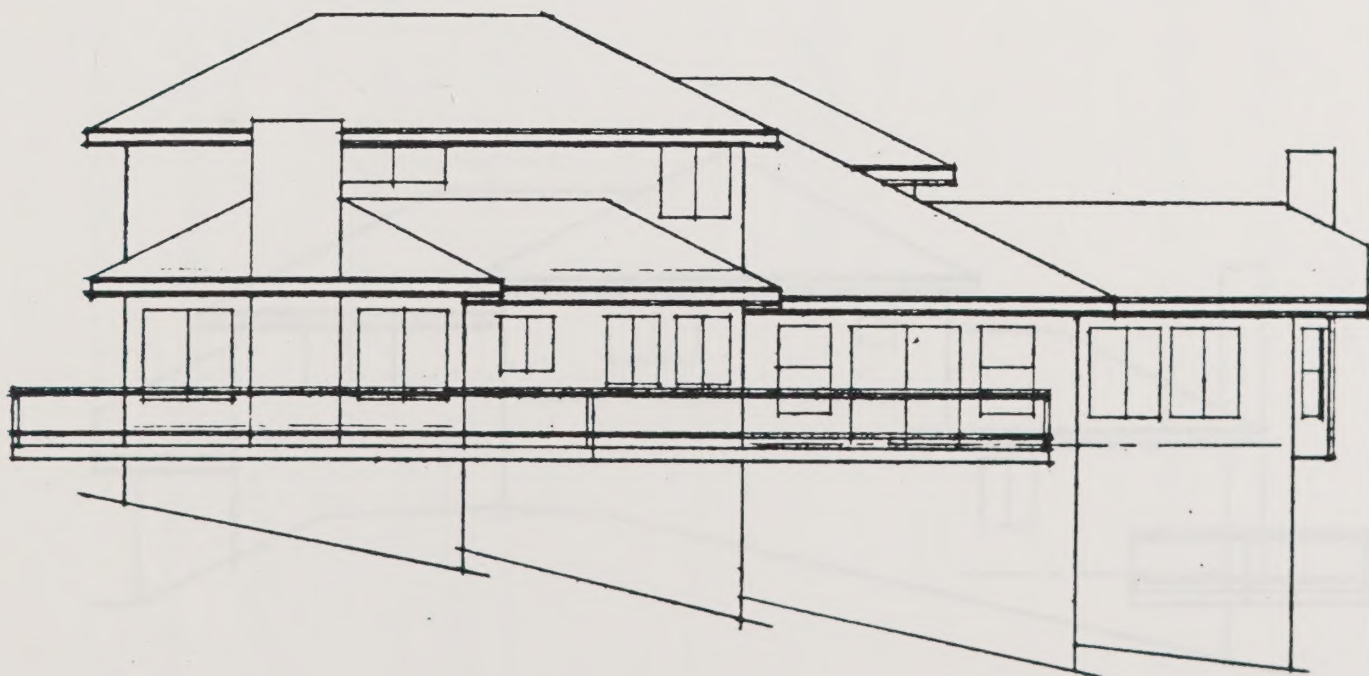
LOT	AREA (SQ. FT.)	NO. OF FLOORS	NO. OF FLOORS	PERCENT OF FLOOR
1	4,320	1	1	100.0
2	4,320	1	1	100.0
3	4,320	1	1	100.0
4	4,320	1	1	100.0
5	4,320	1	1	100.0
6	4,320	1	1	100.0
7	4,320	1	1	100.0
8	4,320	1	1	100.0
9	4,320	1	1	100.0
10	4,320	1	1	100.0
11	4,320	1	1	100.0
12	4,320	1	1	100.0
13	4,320	1	1	100.0
14	4,320	1	1	100.0
15	4,320	1	1	100.0
16	4,320	1	1	100.0
17	4,320	1	1	100.0
18	4,320	1	1	100.0
19	4,320	1	1	100.0
20	4,320	1	1	100.0
21	4,320	1	1	100.0
22	4,320	1	1	100.0
23	4,320	1	1	100.0
24	4,320	1	1	100.0
25	4,320	1	1	100.0
26	4,320	1	1	100.0
27	4,320	1	1	100.0
28	4,320	1	1	100.0
29	4,320	1	1	100.0
30	4,320	1	1	100.0
31	4,320	1	1	100.0
32	4,320	1	1	100.0
33	4,320	1	1	100.0
34	4,320	1	1	100.0
35	4,320	1	1	100.0
36	4,320	1	1	100.0
37	4,320	1	1	100.0
38	4,320	1	1	100.0
39	4,320	1	1	100.0
40	4,320	1	1	100.0
41	4,320	1	1	100.0
42	4,320	1	1	100.0
43	4,320	1	1	100.0
44	4,320	1	1	100.0
45	4,320	1	1	100.0
46	4,320	1	1	100.0
47	4,320	1	1	100.0
48	4,320	1	1	100.0
49	4,320	1	1	100.0
50	4,320	1	1	100.0
51	4,320	1	1	100.0
52	4,320	1	1	100.0
53	4,320	1	1	100.0
54	4,320	1	1	100.0
55	4,320	1	1	100.0
56	4,320	1	1	100.0
57	4,320	1	1	100.0
58	4,320	1	1	100.0
59	4,320	1	1	100.0
60	4,320	1	1	100.0
61	4,320	1	1	100.0
62	4,320	1	1	100.0
63	4,320	1	1	100.0
64	4,320	1	1	100.0
65	4,320	1	1	100.0
66	4,320	1	1	100.0
67	4,320	1	1	100.0
68	4,320	1	1	100.0
69	4,320	1	1	100.0
70	4,320	1	1	100.0
71	4,320	1	1	100.0
72	4,320	1	1	100.0
73	4,320	1	1	100.0
74	4,320	1	1	100.0
75	4,320	1	1	100.0
76	4,320	1	1	100.0
77	4,320	1	1	100.0
78	4,320	1	1	100.0
79	4,320	1	1	100.0
80	4,320	1	1	100.0
81	4,320	1	1	100.0
82	4,320	1	1	100.0
83	4,320	1	1	100.0
84	4,320	1	1	100.0
85	4,320	1	1	100.0
86	4,320	1	1	100.0
87	4,320	1	1	100.0
88	4,320	1	1	100.0
89	4,320	1	1	100.0
90	4,320	1	1	100.0
91	4,320	1	1	100.0
92	4,320	1	1	100.0
93	4,320	1	1	100.0
94	4,320	1	1	100.0
95	4,320	1	1	100.0
96	4,320	1	1	100.0
97	4,320	1	1	100.0
98	4,320	1	1	100.0
99	4,320	1	1	100.0
100	4,320	1	1	100.0

TABLE C-1. LOT DATA

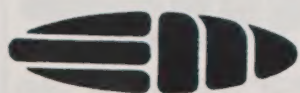
LOT	AREA (SQ. FT.)	SQ. FT. OF FLOOR PLAN	SQ. FT. OF FOOTPRINT	PERCENT OF COVERAGE
1	9,625	2,926	2,596	27.0
2	9,300	2,973	2,146	23.1
3	8,835	2,804	2,219	25.1
4	10,240	2,804	2,219	21.7
5	8,140	2,575	1,430	17.6
6	8,187	2,866	1,598	19.5
7	13,860	2,476	2,218	16.0
8	7,176	2,551	1,713	23.9
9	8,400	2,551	1,713	20.4
10	8,695	2,718	1,573	18.1
11	9,200	2,677	1,668	18.1
12	9,540	2,551	1,713	17.9
13	10,920	2,718	1,573	14.4
14	10,206	2,677	1,668	16.3
15	9,617	2,677	1,668	17.3
16	9,956	2,973	2,146	21.6
17	10,802	3,423	1,970	18.2
18	5,141	3,233	1,989	38.7
19	5,532	3,097	1,890	34.2
20	9,193	3,087	2,698	29.3
21	5,936	2,703	1,680	28.3
22	5,460	2,556	1,537	28.1
23	6,220	2,863	1,814	29.2
24	33,799	-	-	-



FRONT ELEVATION



REAR ELEVATION



earth metrics

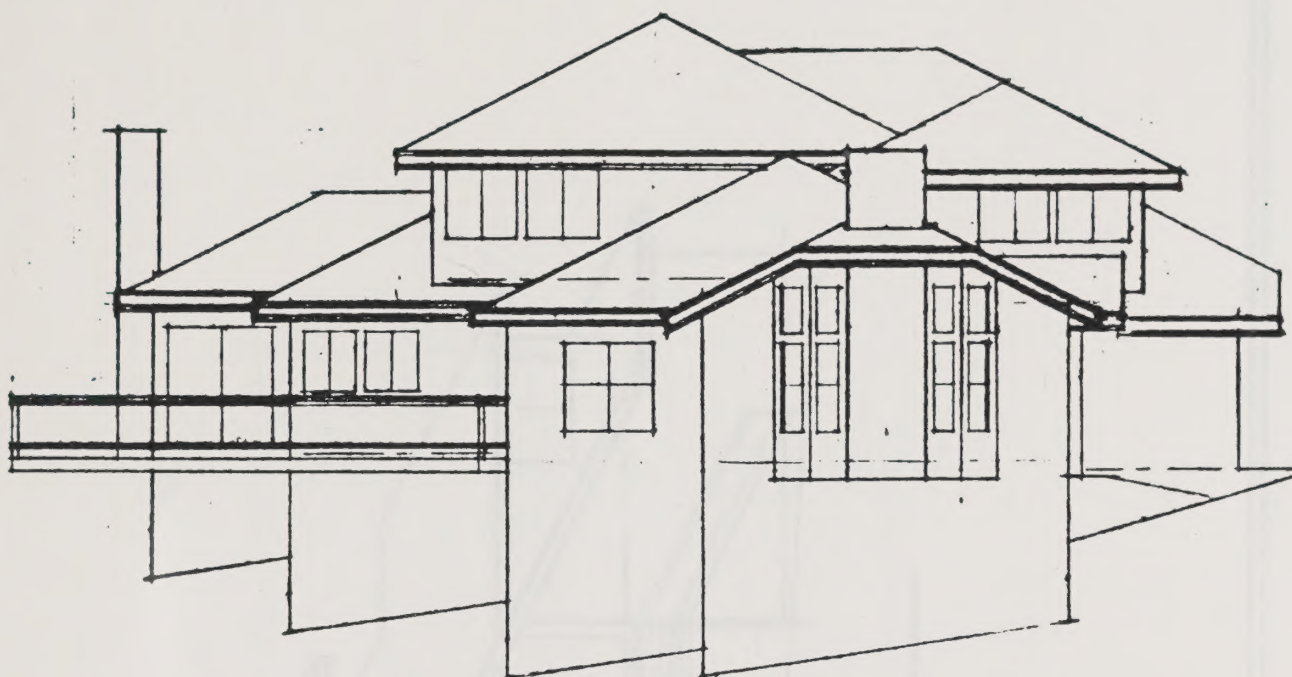


SCALE

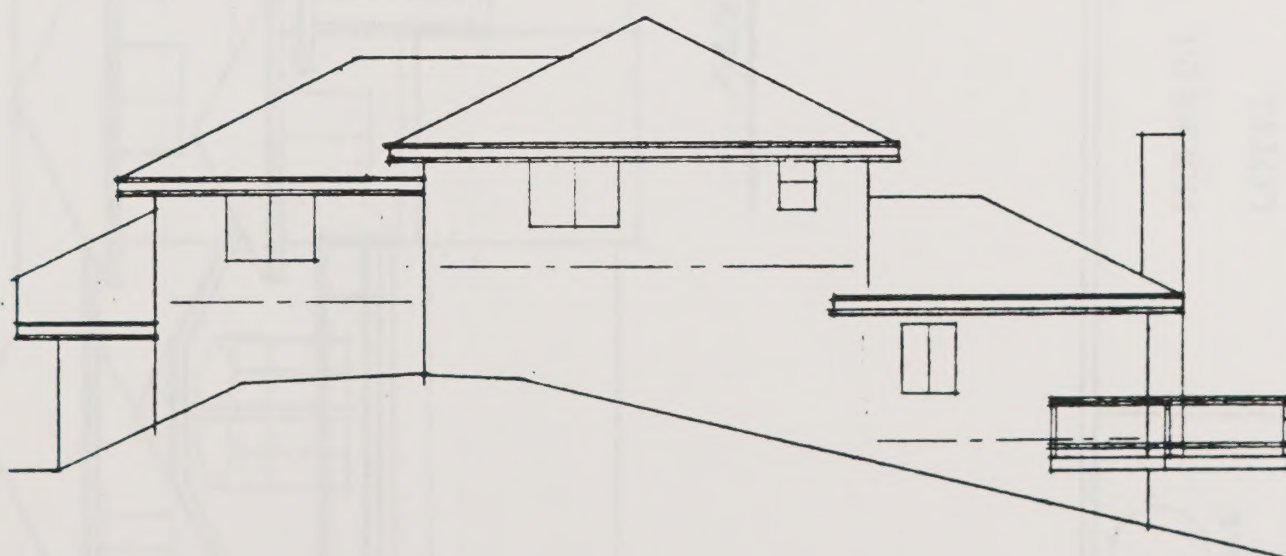
0 10 20 30

FIGURE C-1 ARCHITECTURAL DRAWINGS
OF PROPOSED RESIDENCES

LOT #1



LEFT SIDE ELEV.



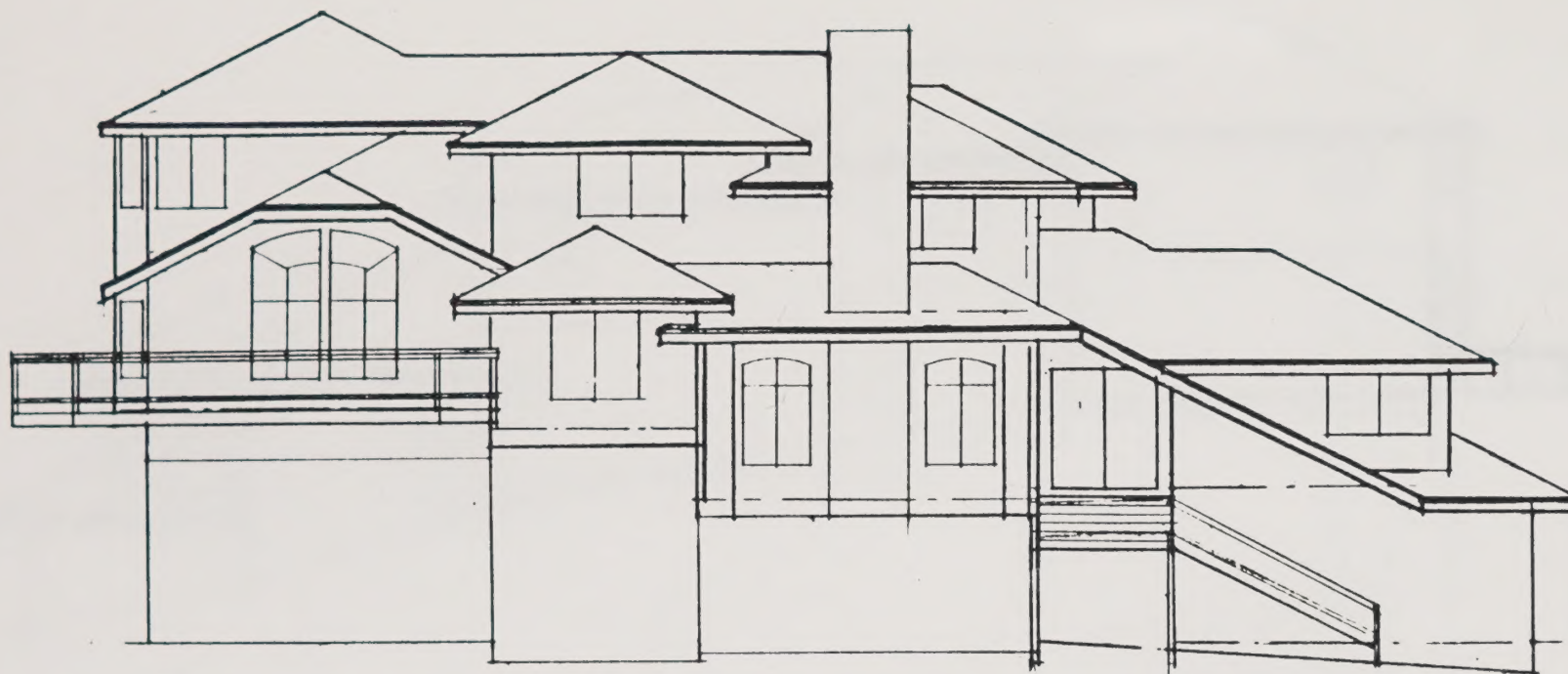
RIGHT SIDE ELEV.



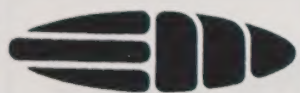
0 10 20 30 40

FIGURE C-1 (CONTINUED)

LOT #1



FRONT ELEVATION



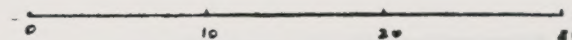
earth metrics

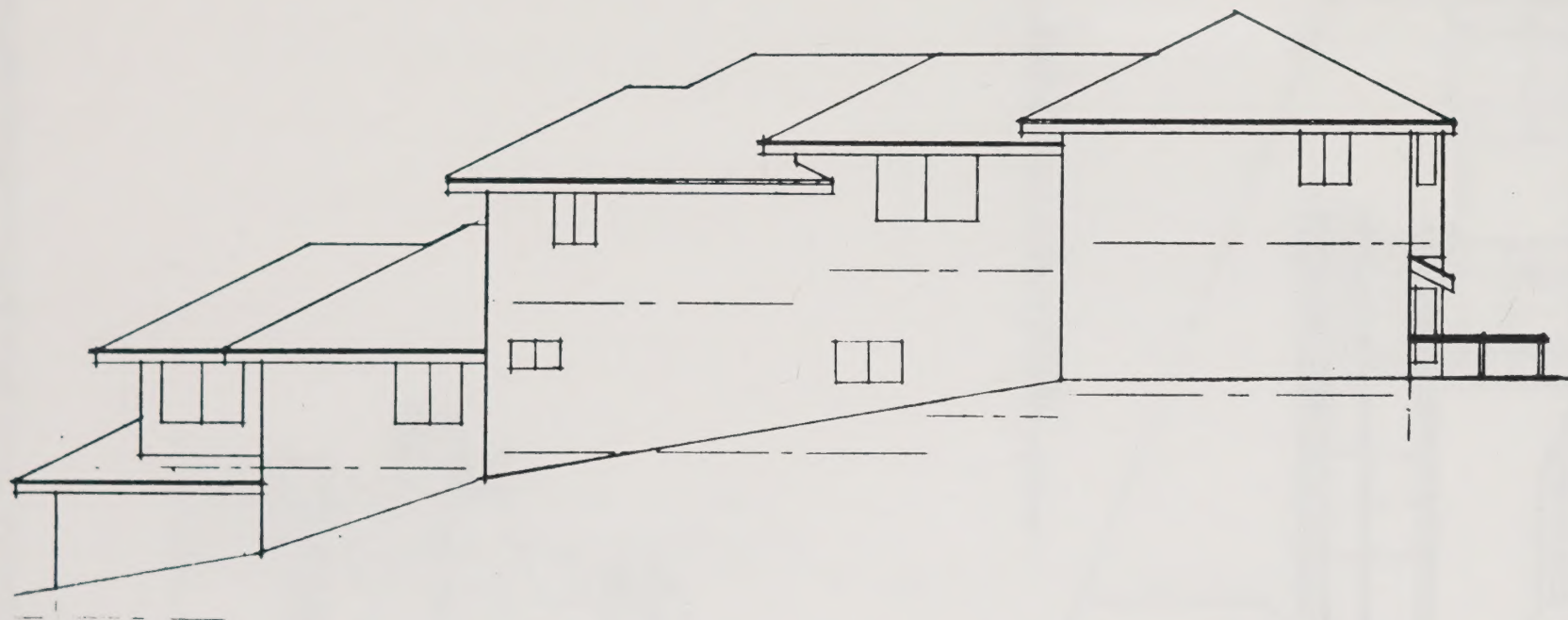


SCALE

FIGURE C-1 (CONTINUED)

LOT#2





REAR ELEVATION



earth metrics

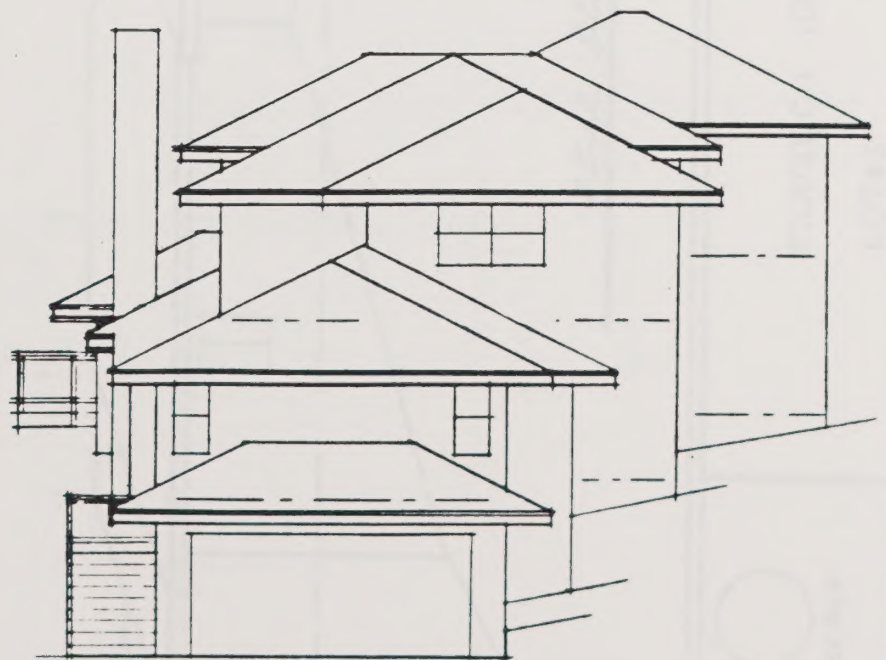
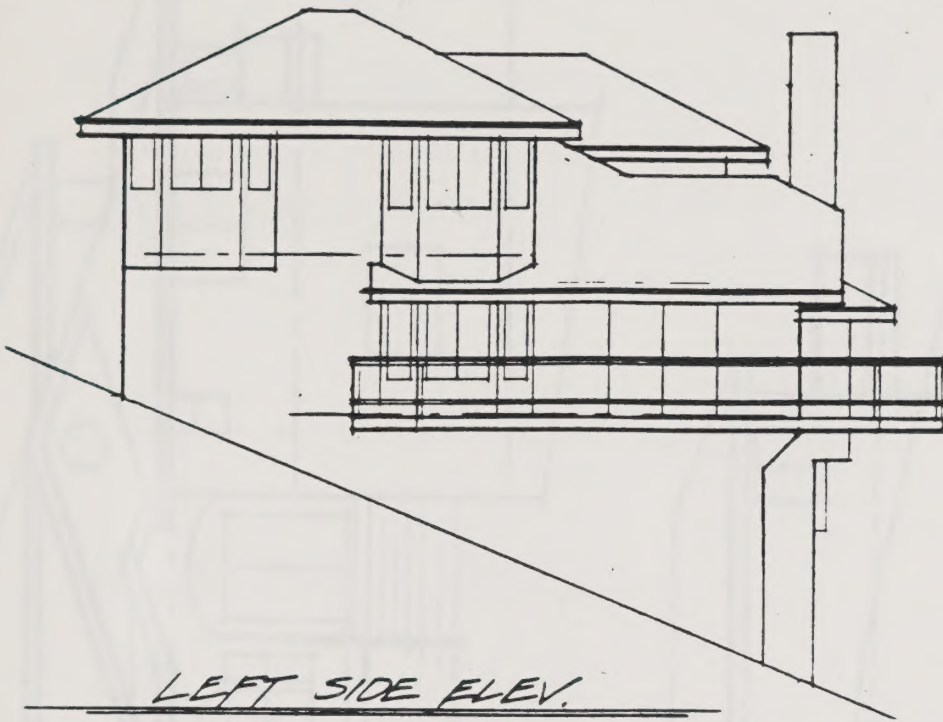


SCALE

FIGURE C-1 (CONTINUED)

LOT#2





earth metrics



SCALE

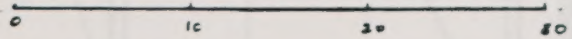
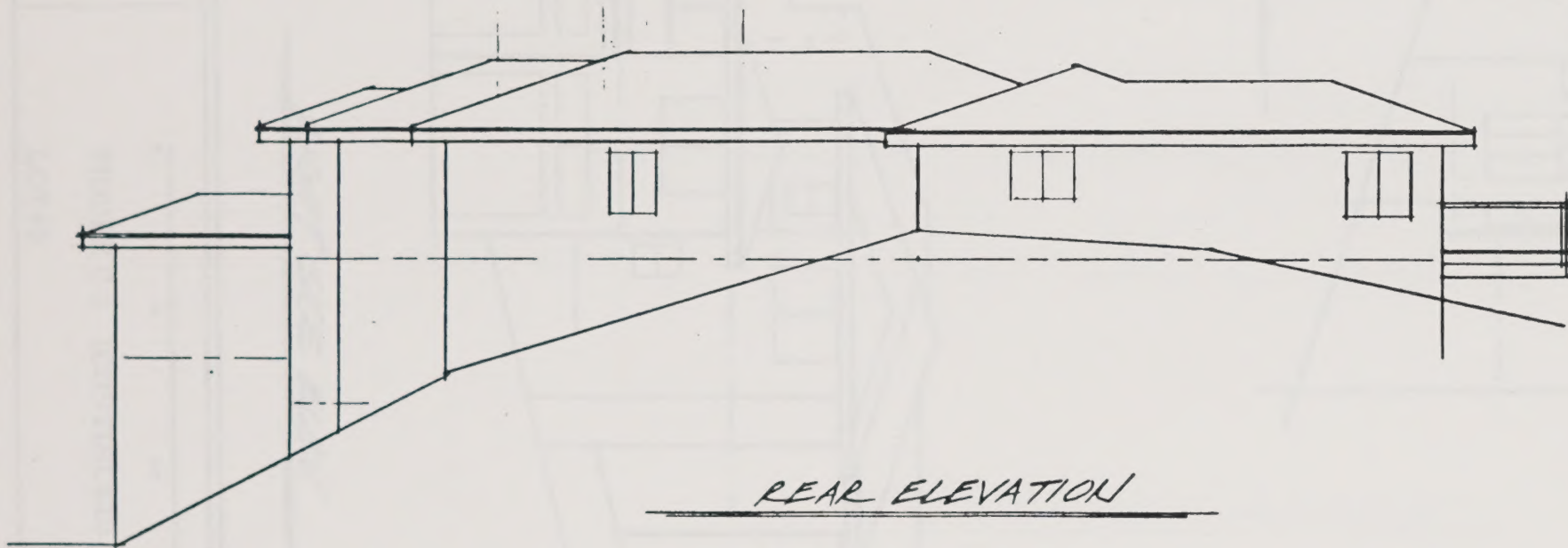


FIGURE C-1 (CONTINUED)

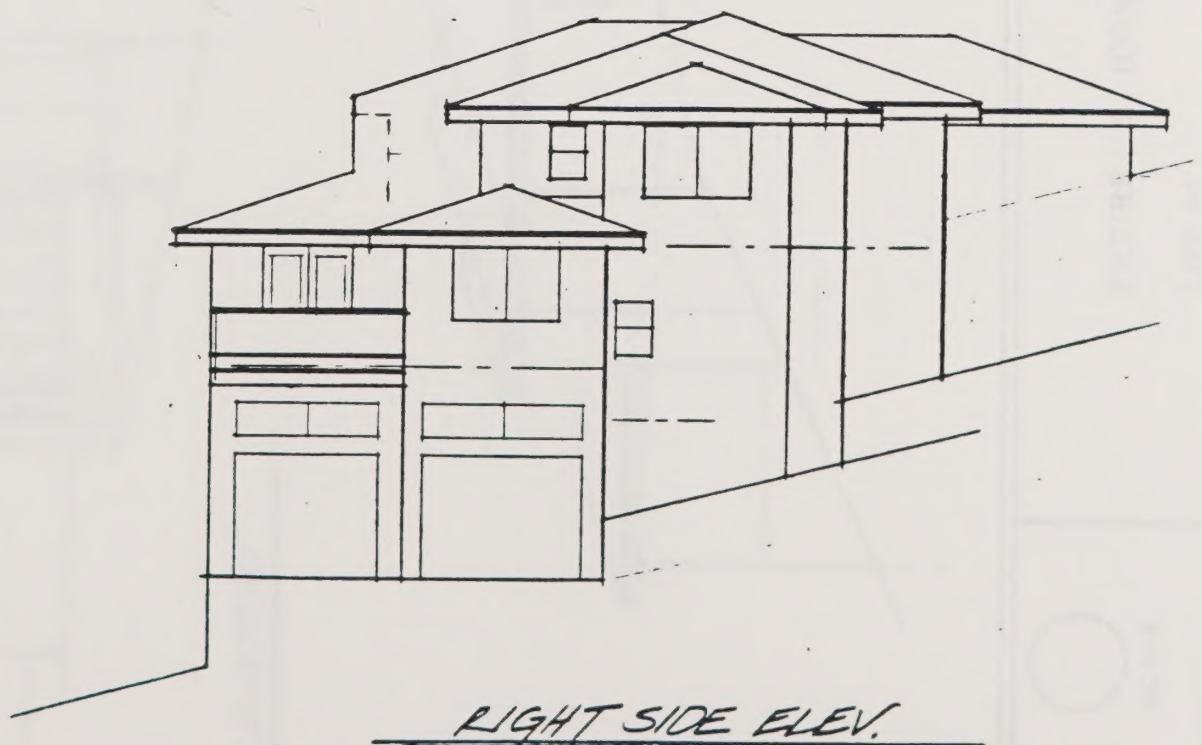
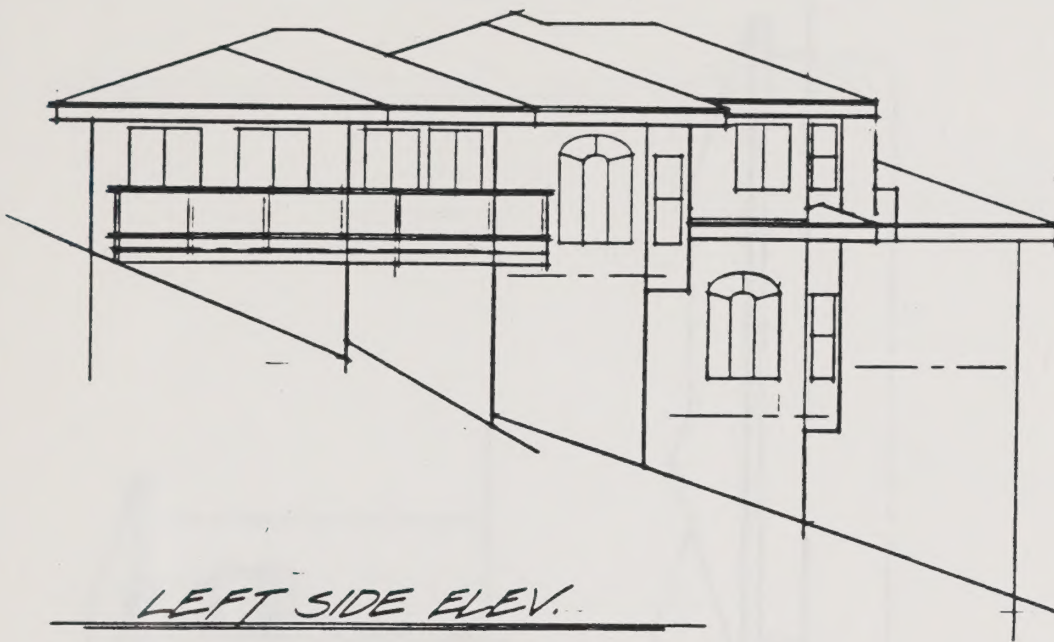
LOT#2



FRONT ELEVATION



REAR ELEVATION



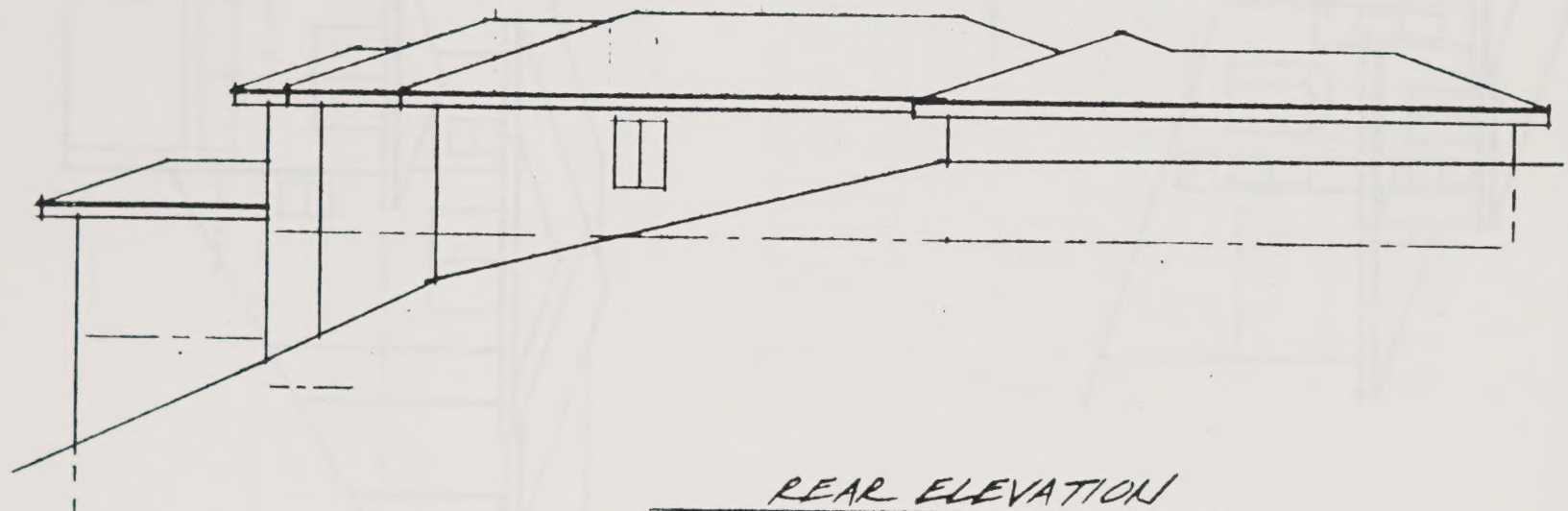
0 10 20 30

FIGURE C-1 (CONTINUED)

LOT#3



FRONT ELEVATION



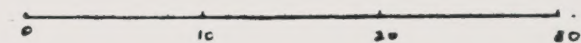
REAR ELEVATION

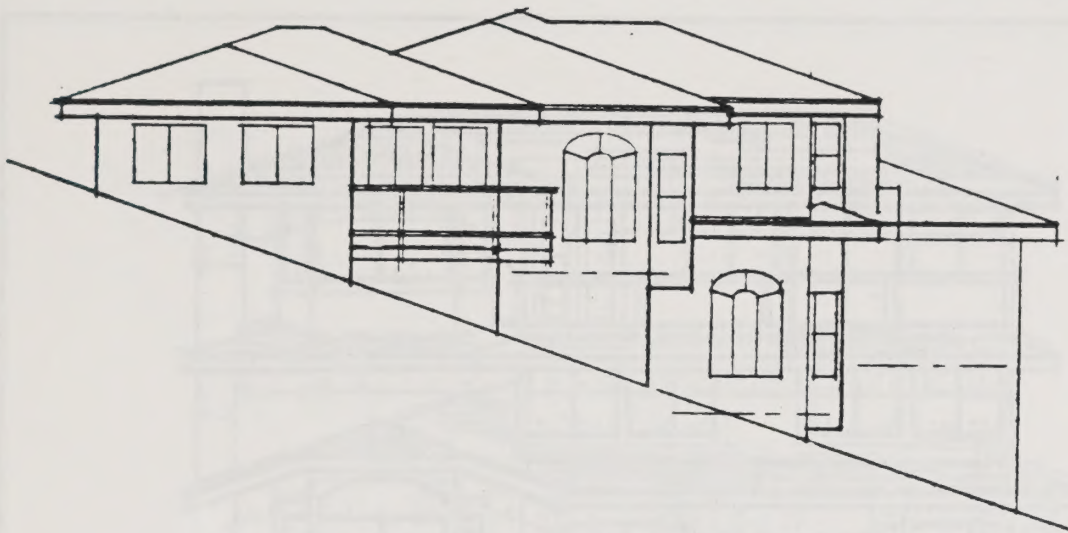


SCALE

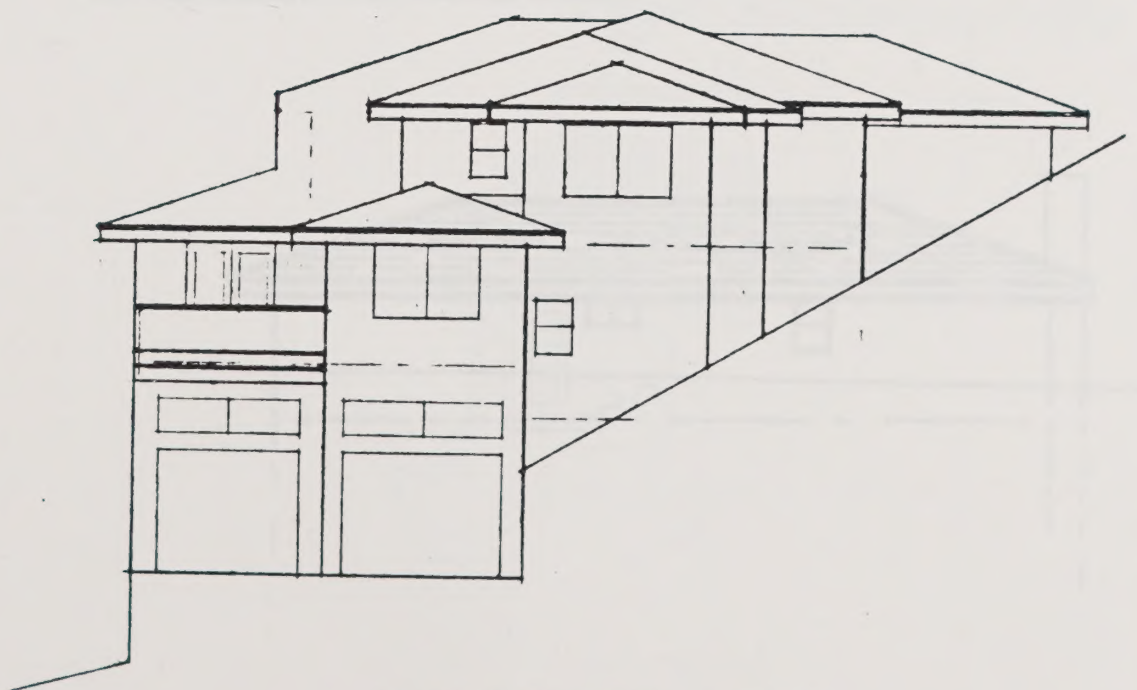
FIGURE C-1 (CONTINUED)

LOT #4





LEFT SIDE ELEV.

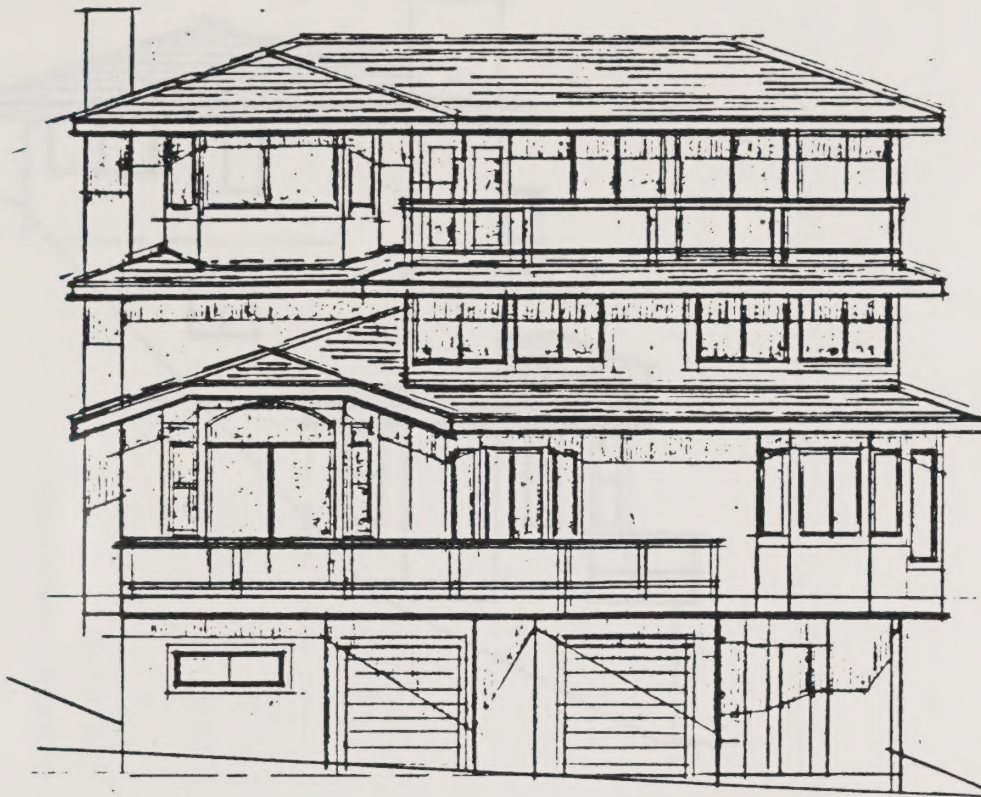


RIGHT SIDE ELEV.



FIGURE C-1 (CONTINUED)

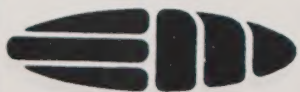
LOT#4



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE

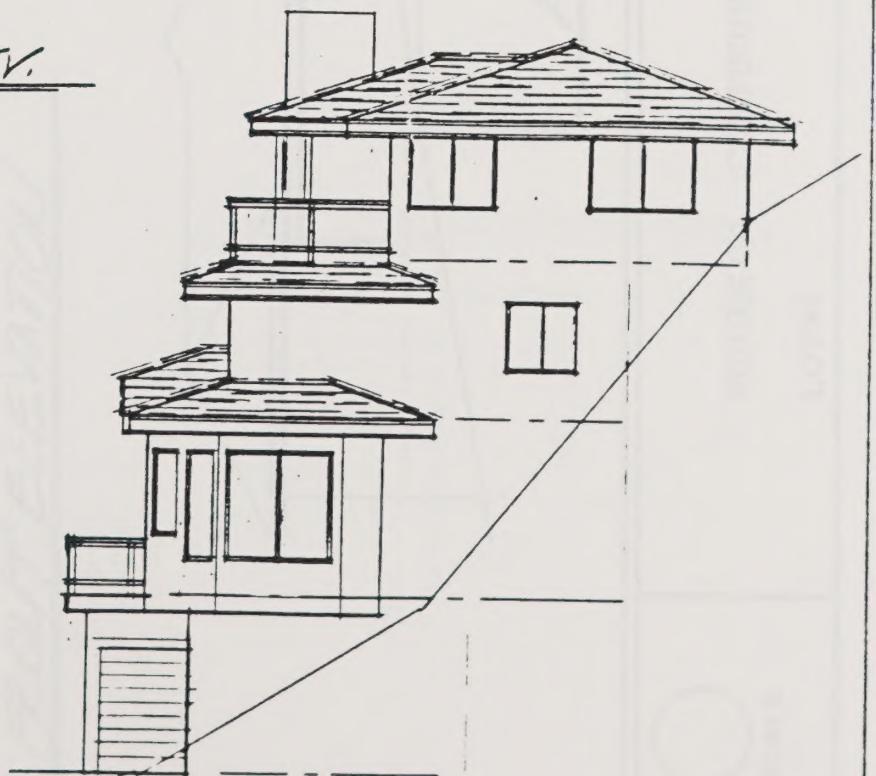
0 10 20 30

FIGURE C-1 (CONTINUED)

LOT#5



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics

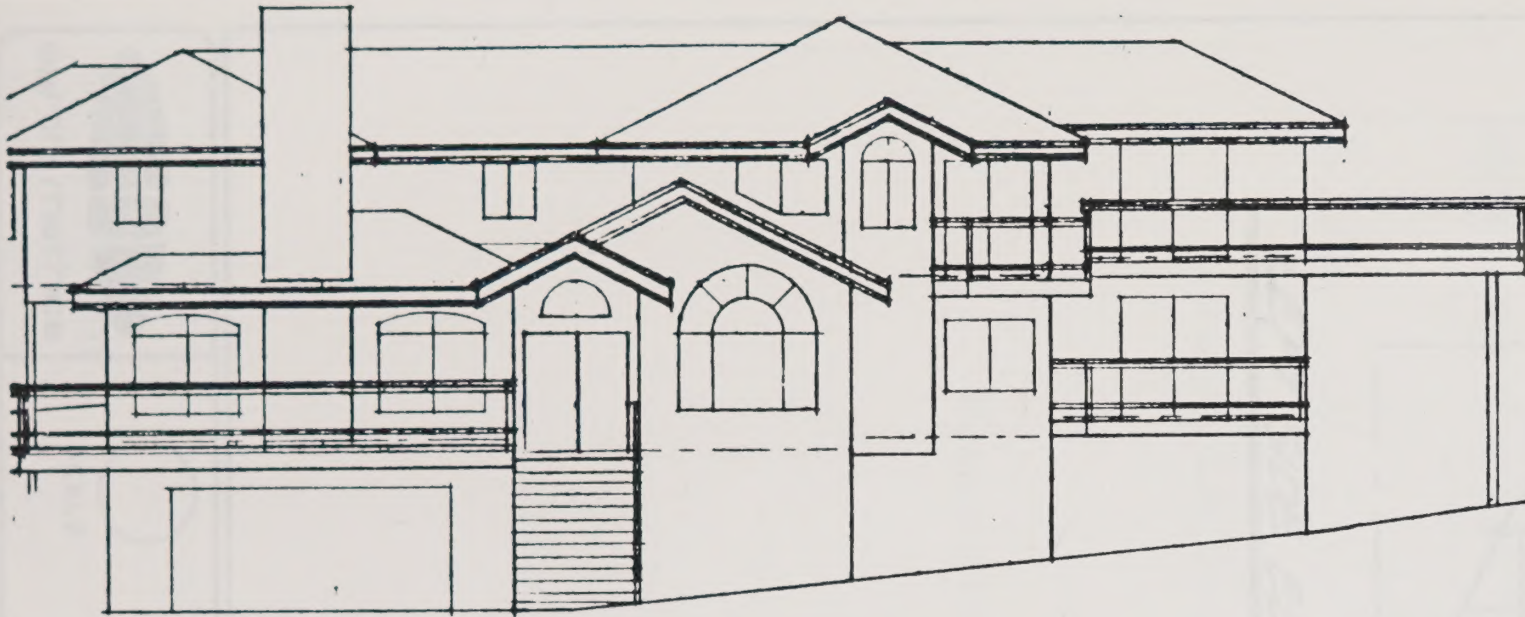


SCALE

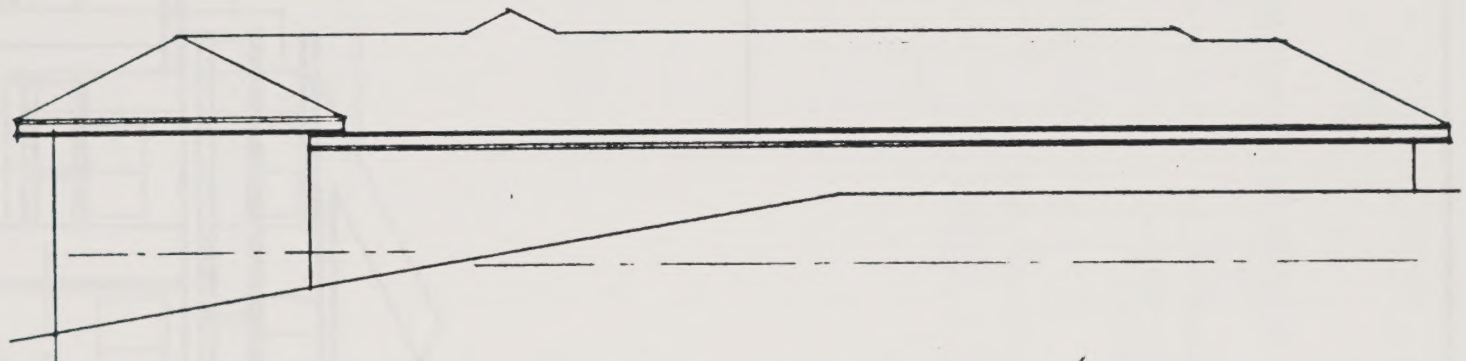
0 10 20 30

FIGURE C-1 (CONTINUED)

LOT #5



FRONT ELEVATION

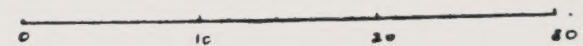


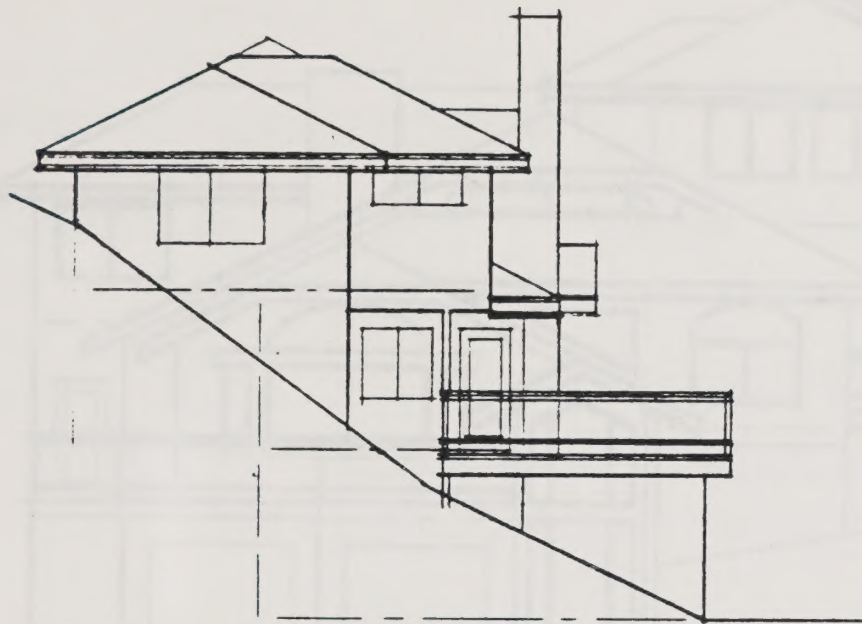
REAR ELEVATION



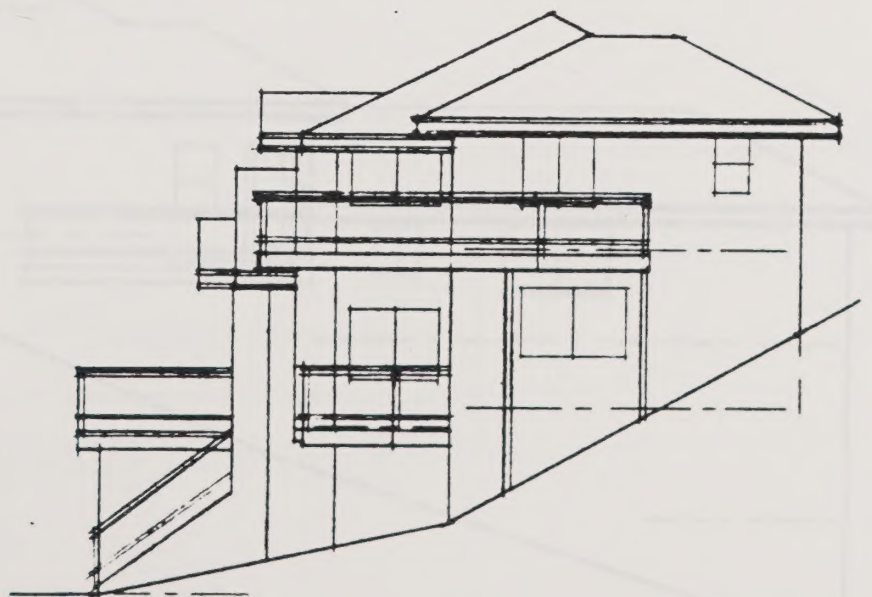
FIGURE C-1 (CONTINUED)

LOT#6

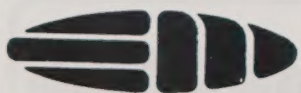




LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics

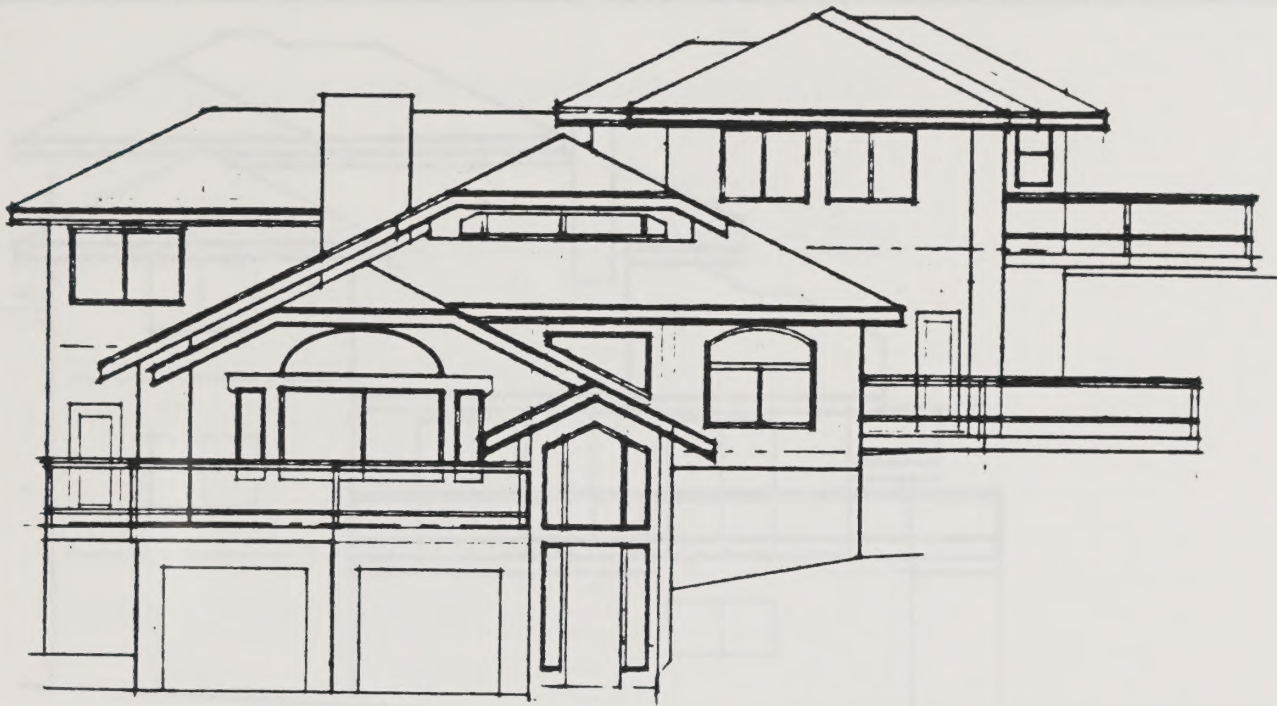


SCALE

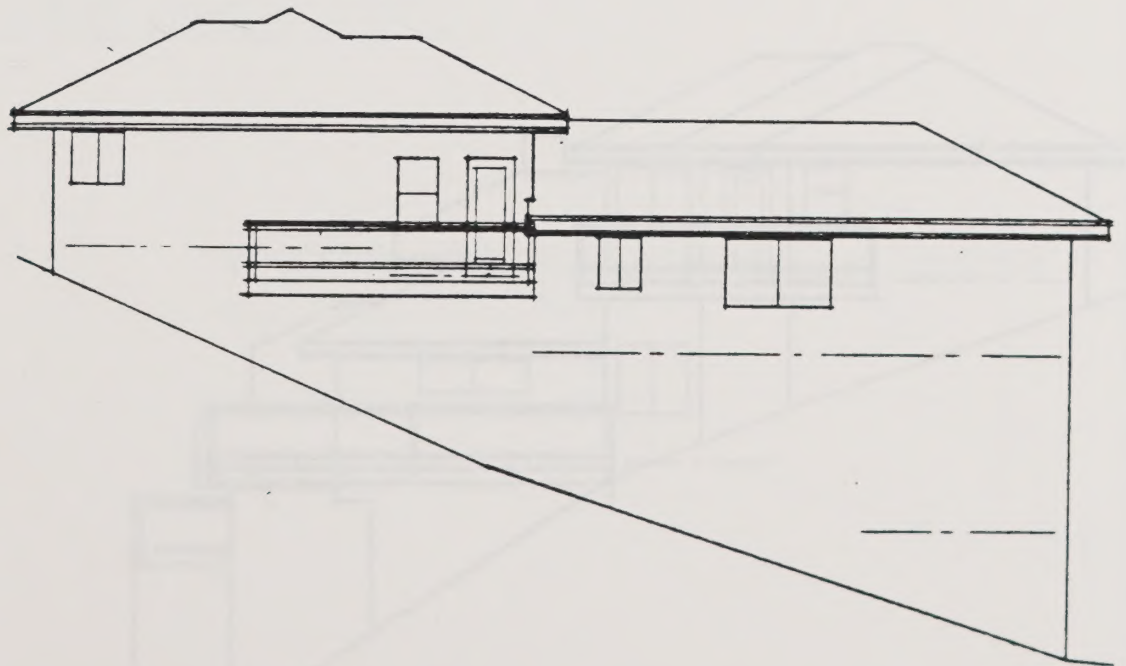


FIGURE C-1 (CONTINUED)

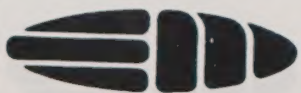
LOT#6



FRONT ELEVATION



REAR ELEVATION



earth metrics

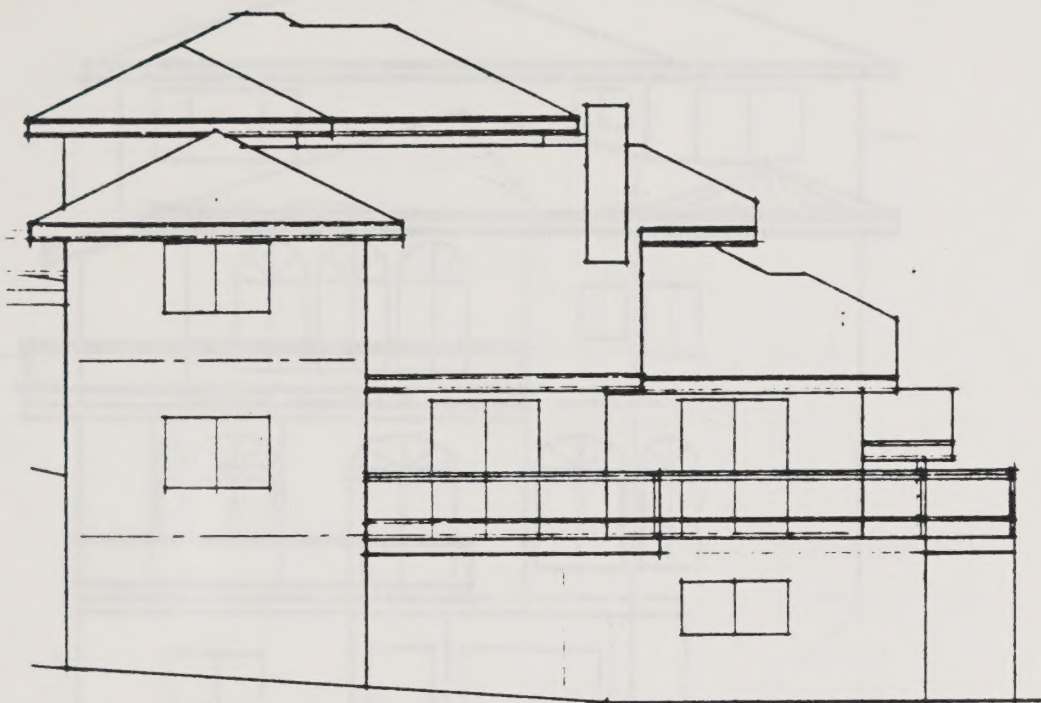


SCALE

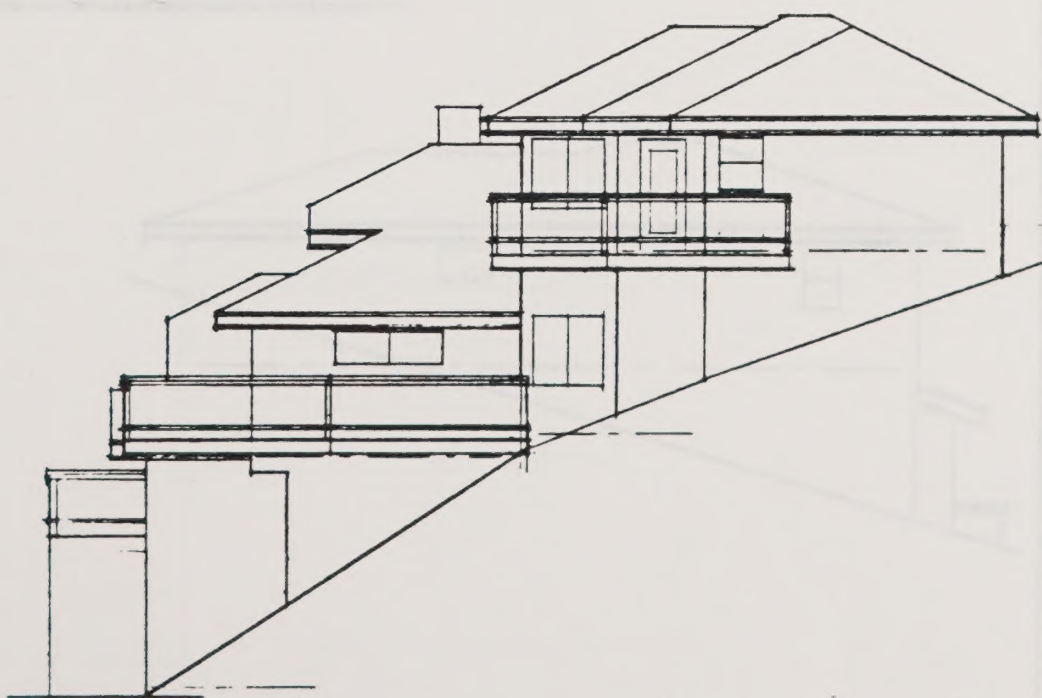


FIGURE C-1 (CONTINUED)

LOT#7



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



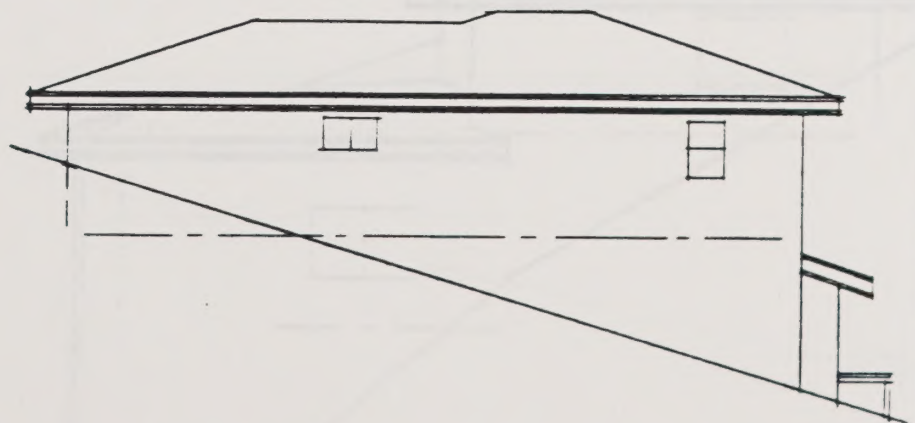
0 10 20 30

FIGURE C-1 (CONTINUED)

LOT#7



FRONT ELEVATION



REAR ELEVATION



earth metrics

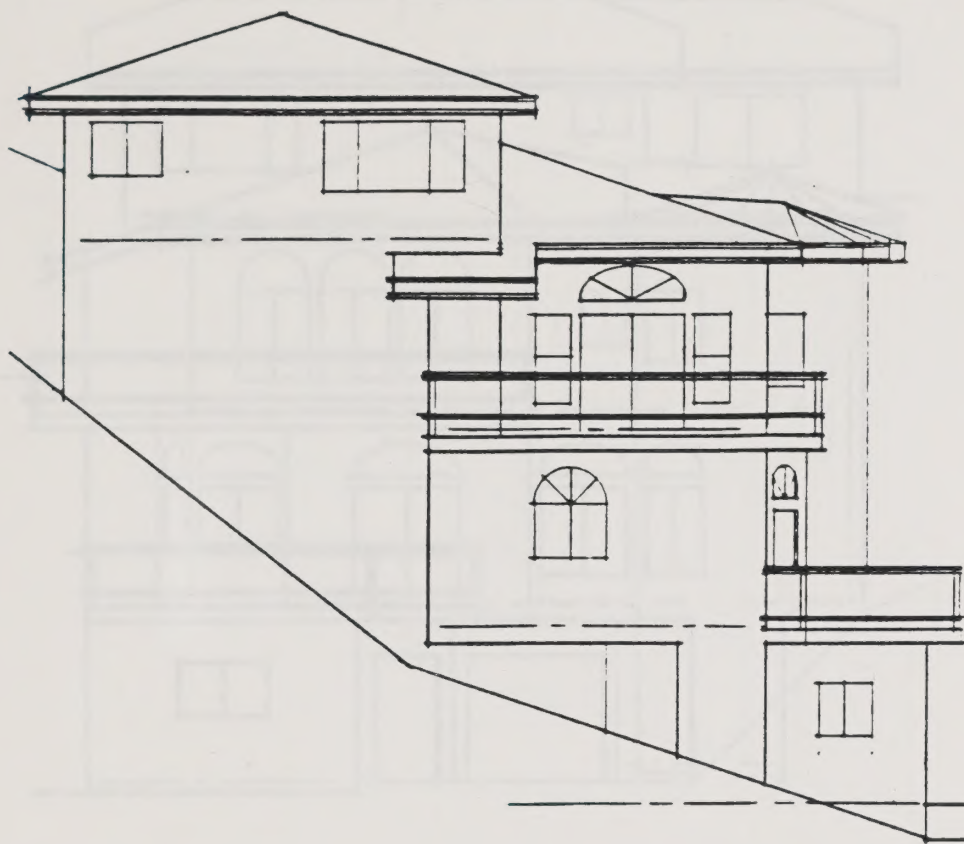


SCALE

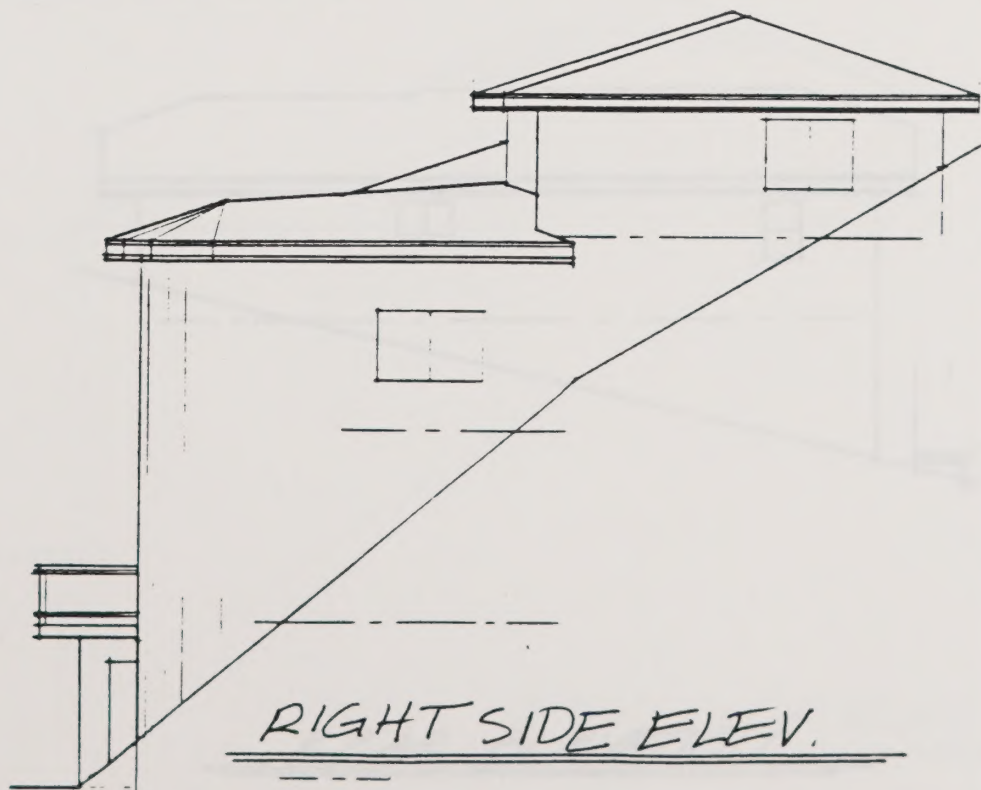


FIGURE C-1 (CONTINUED)

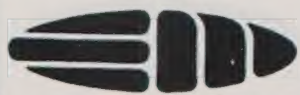
LOT#8



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics



SCALE

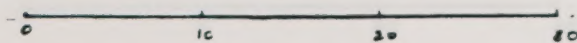
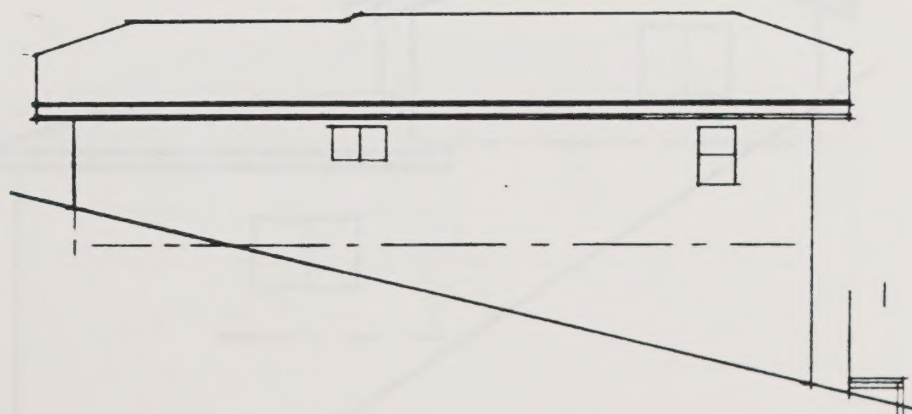


FIGURE C-1 (CONTINUED)

LOT#8



FRONT ELEVATION

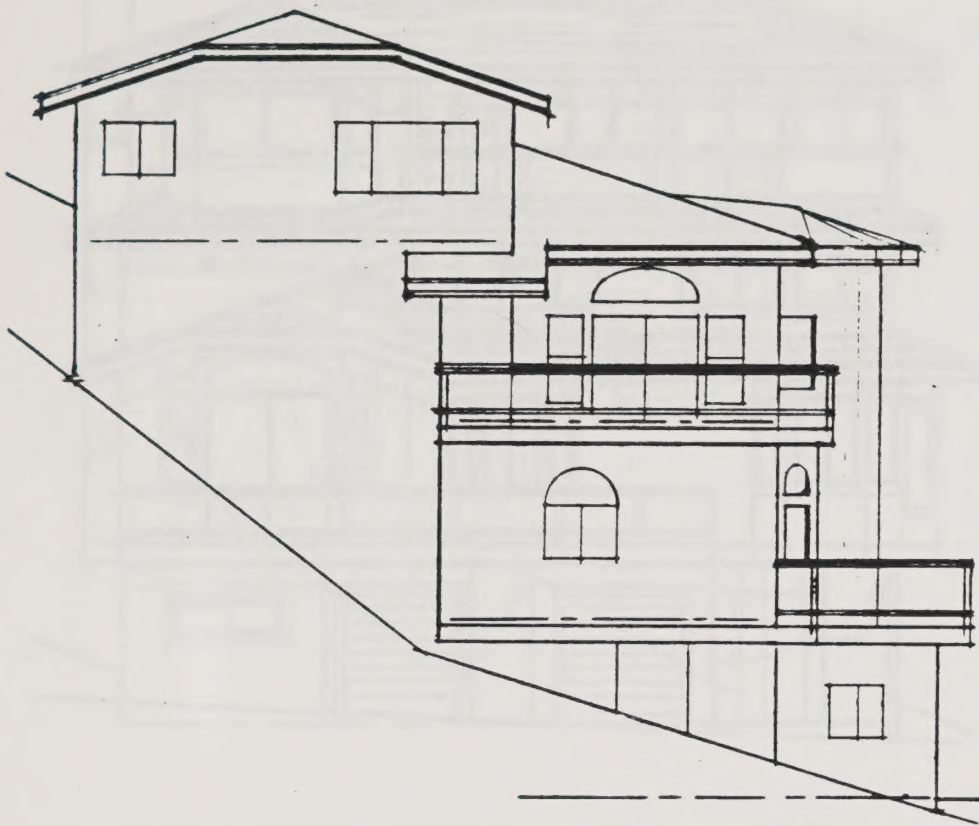


REAR ELEVATION

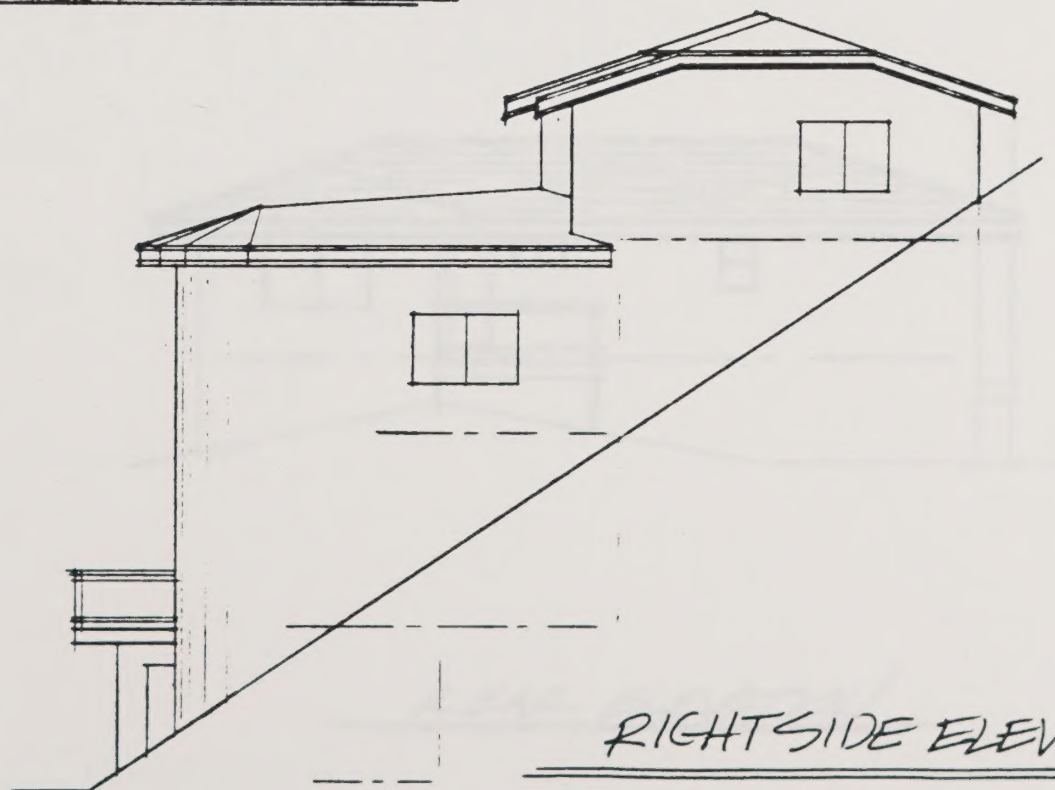


FIGURE C-1 (CONTINUED)

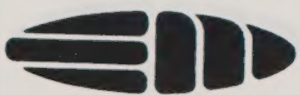
LOT#9



LEFT SIDE ELEV.



RIGHTSIDE ELEV.



earth metrics

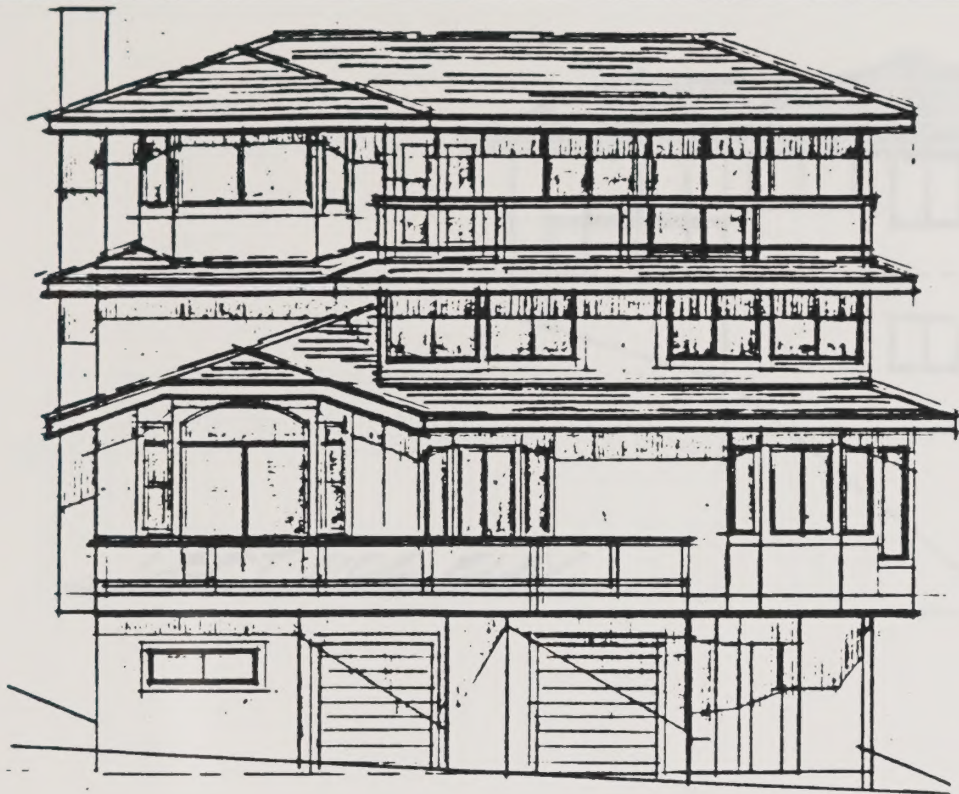


SCALE

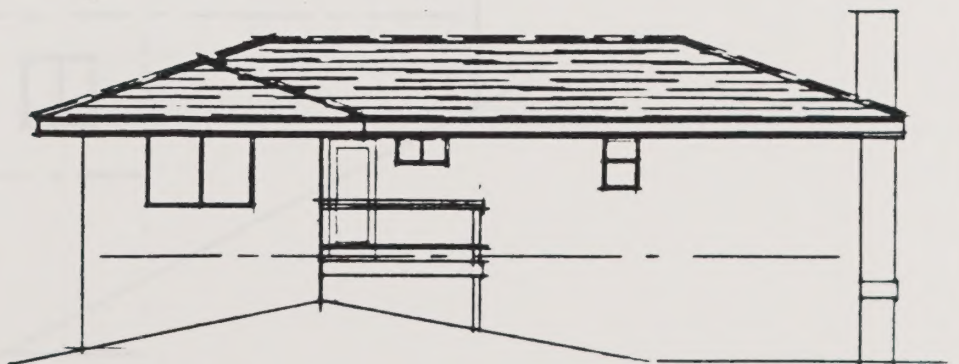
0 10 20 30

FIGURE C-1 (CONTINUED)

LOT#9



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE



FIGURE C-1 (CONTINUED)

LOT#10

LEFT SIDE ELEV.



RIGHT SIDE ELEV.

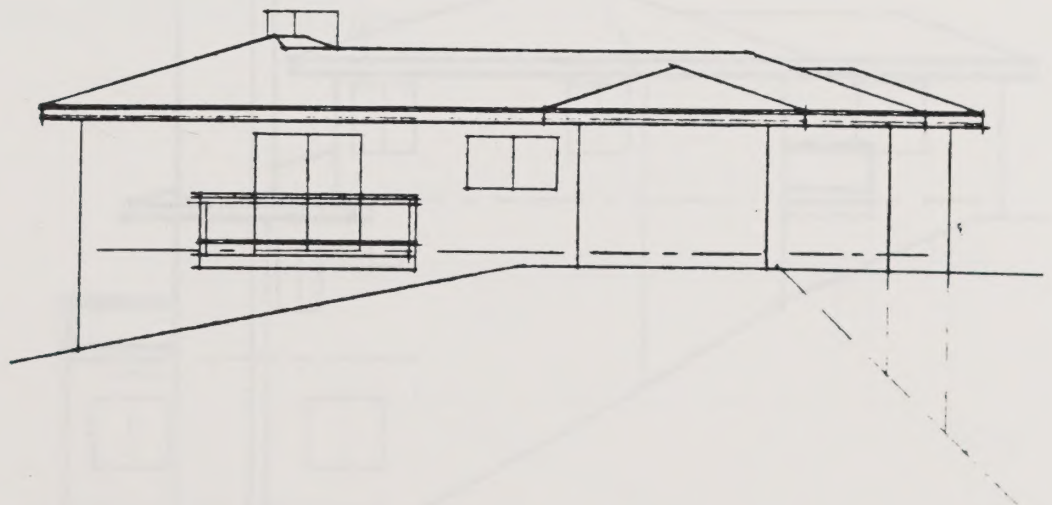


FIGURE C-1 (CONTINUED)

LOT#10



FRONT ELEVATION



REAR ELEVATION



earth metrics

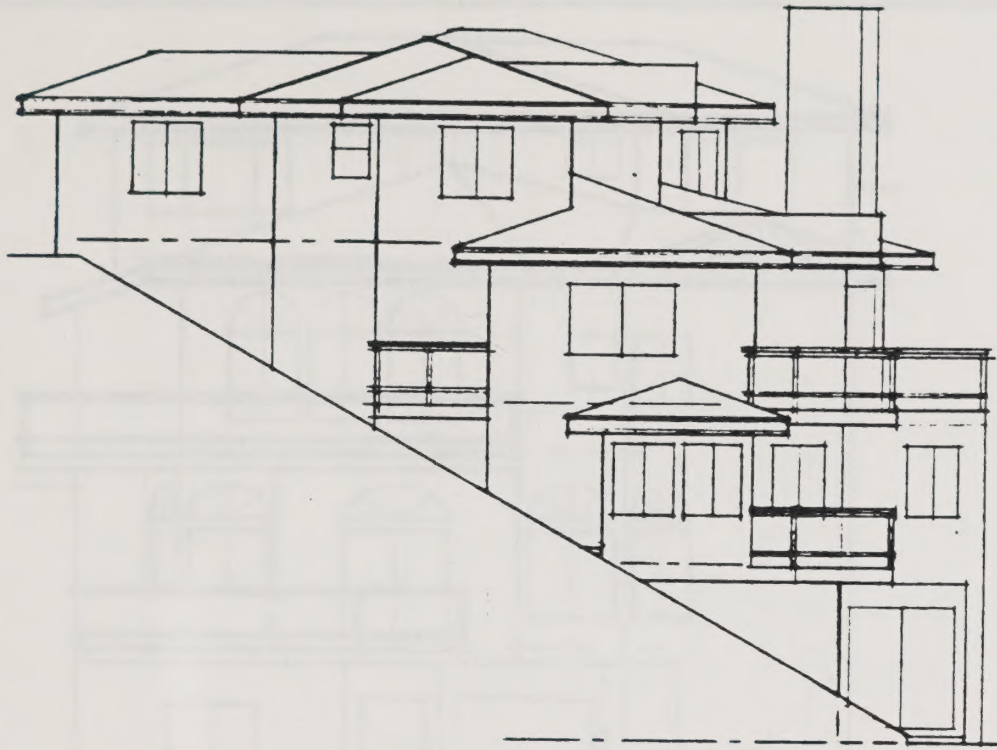


SCALE

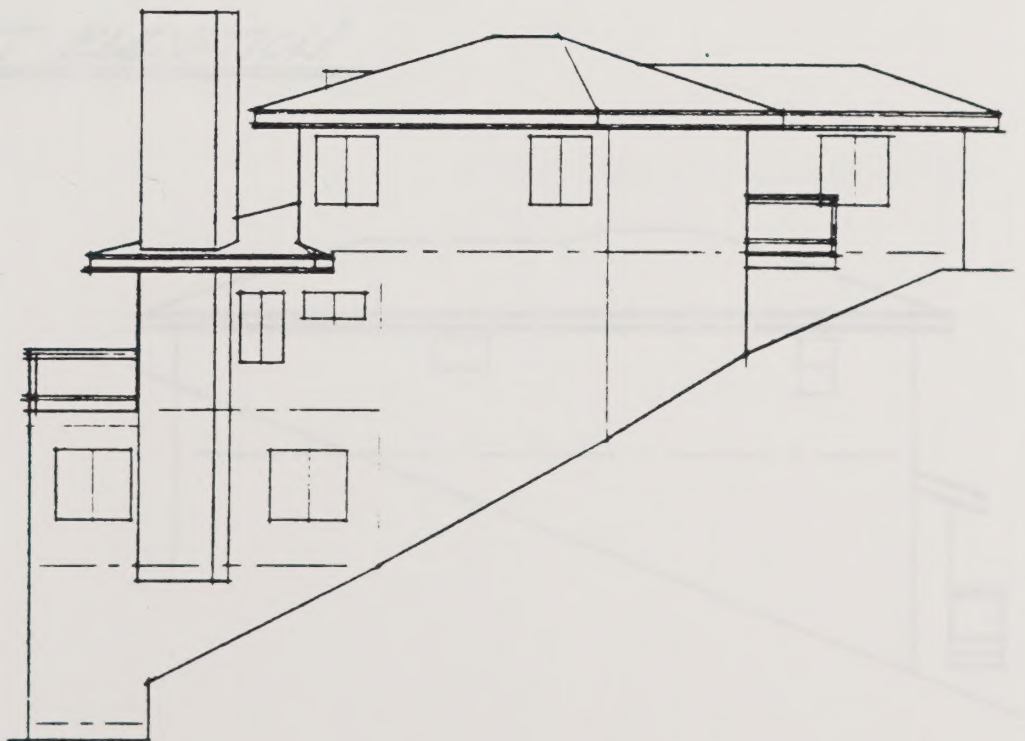


FIGURE C-1 (CONTINUED)

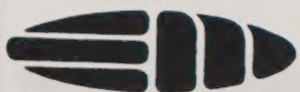
LOT#11



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics



SCALE

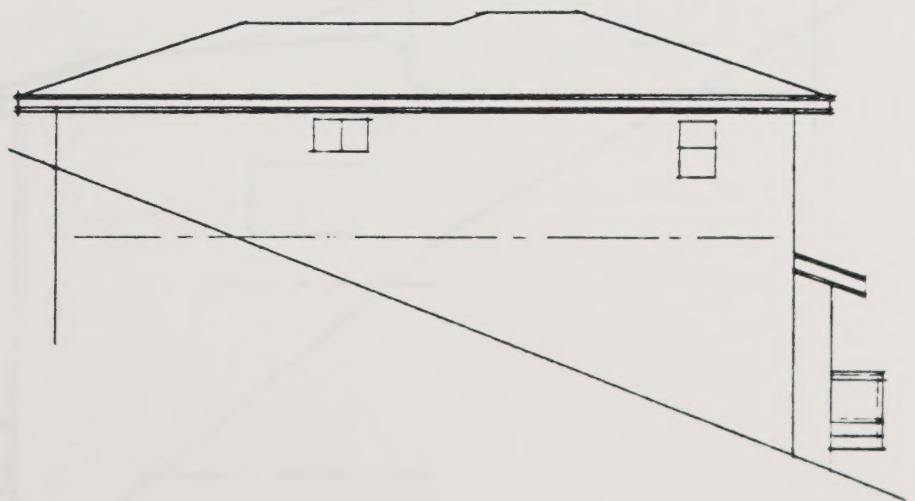


FIGURE C-1 (CONTINUED)

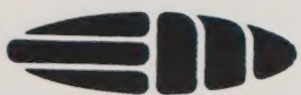
LOT #11



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE

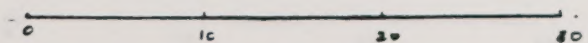
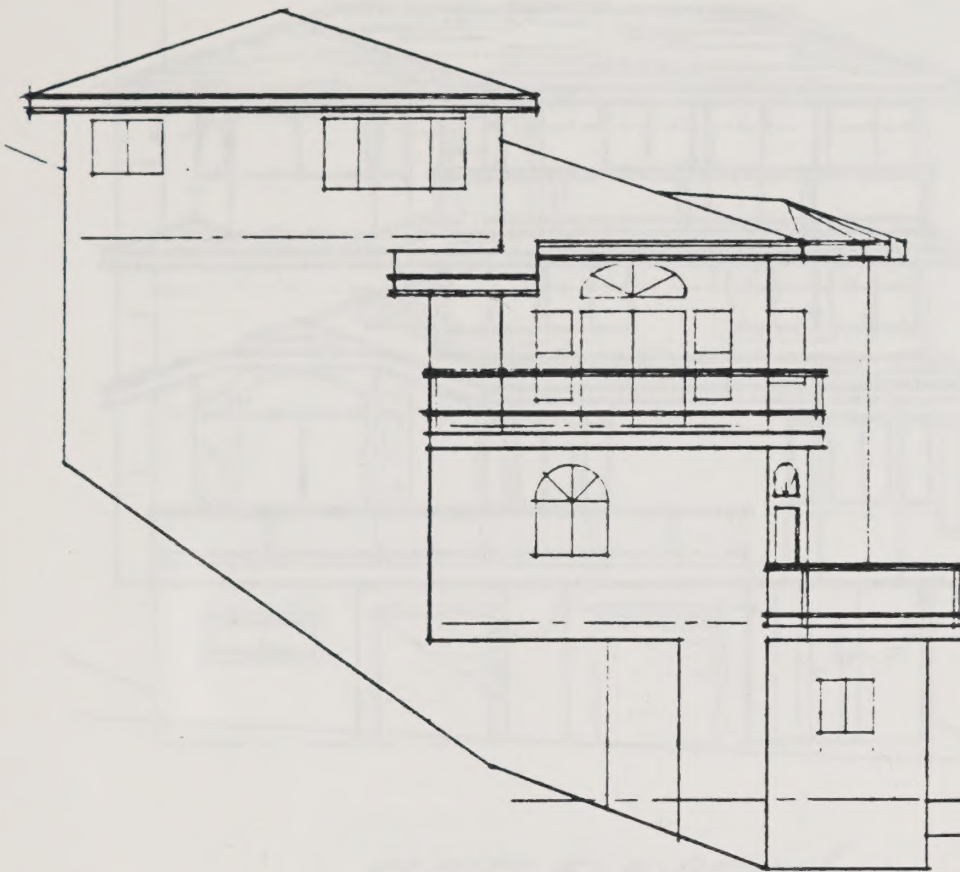
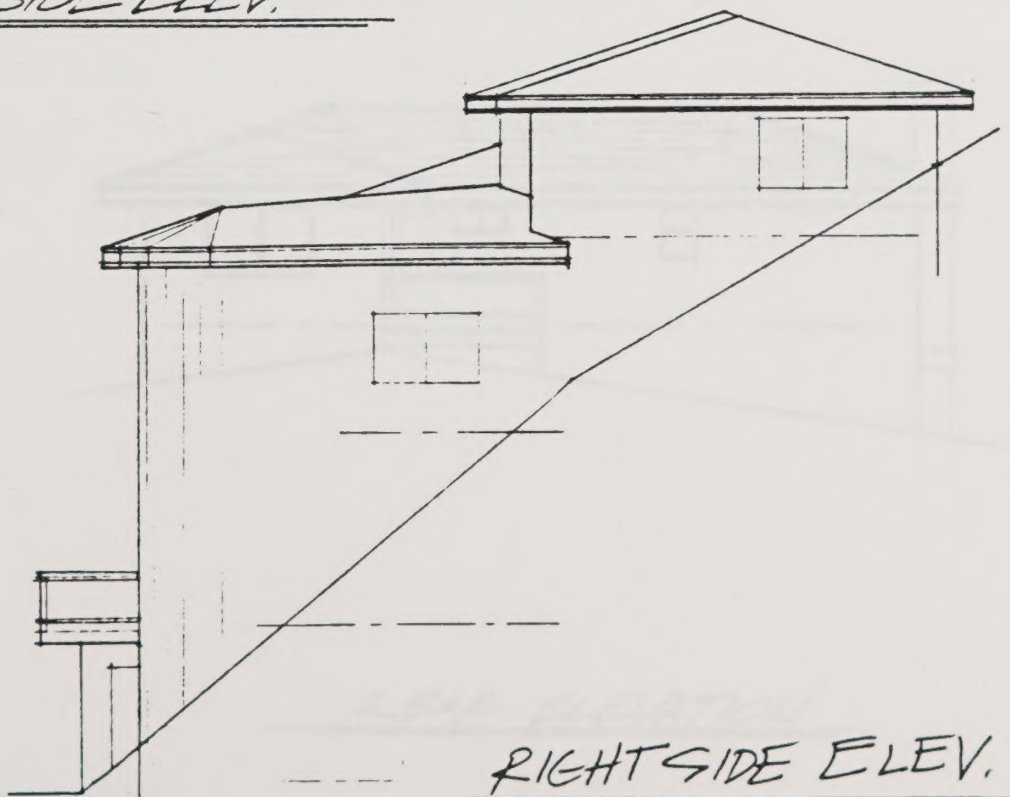


FIGURE C-1 (CONTINUED)

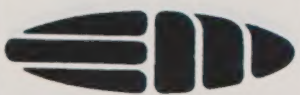
LOT#12



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics

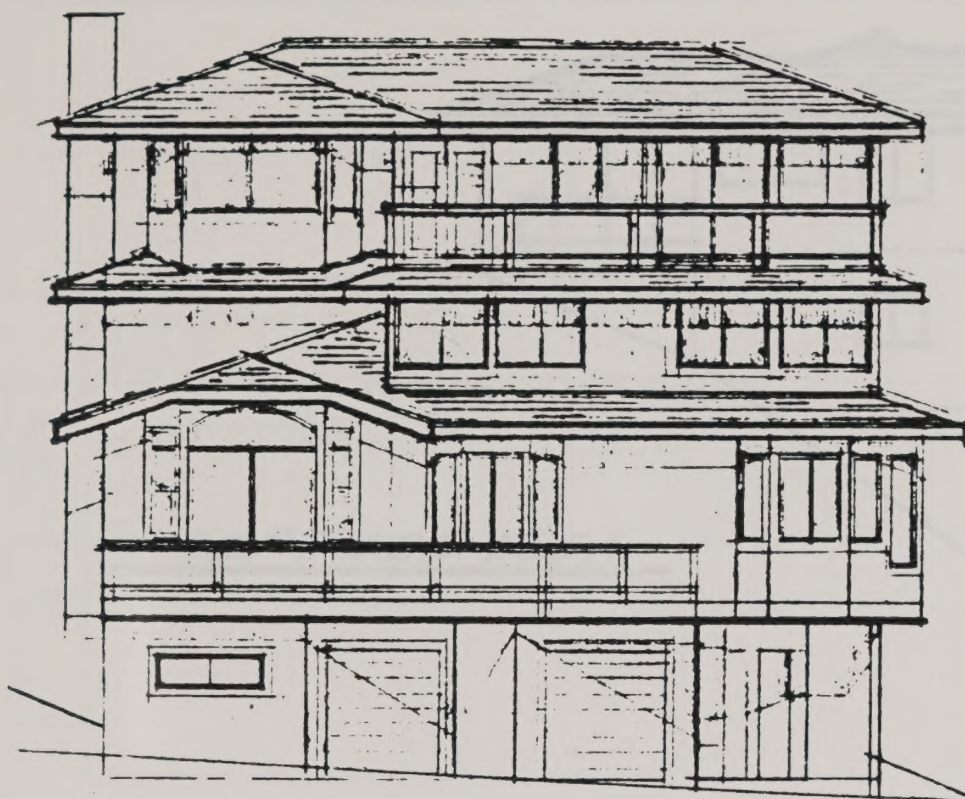


SCALE

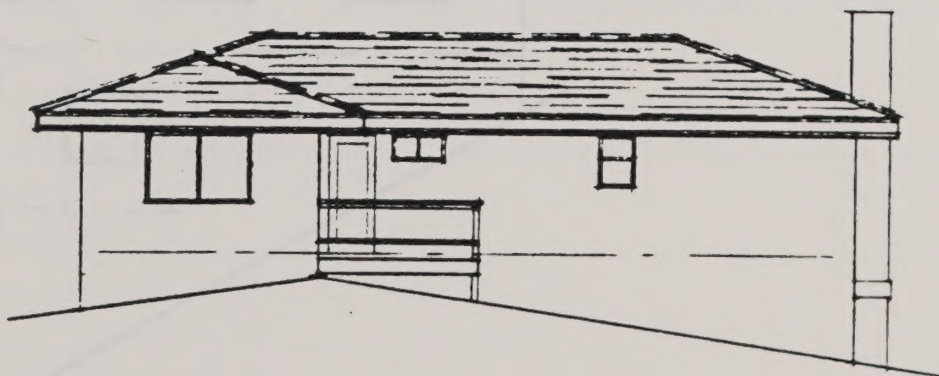


FIGURE C-1 (CONTINUED)

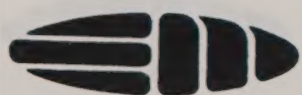
LOT#12



FRONT ELEVATION



REAR ELEVATION



earth metrics



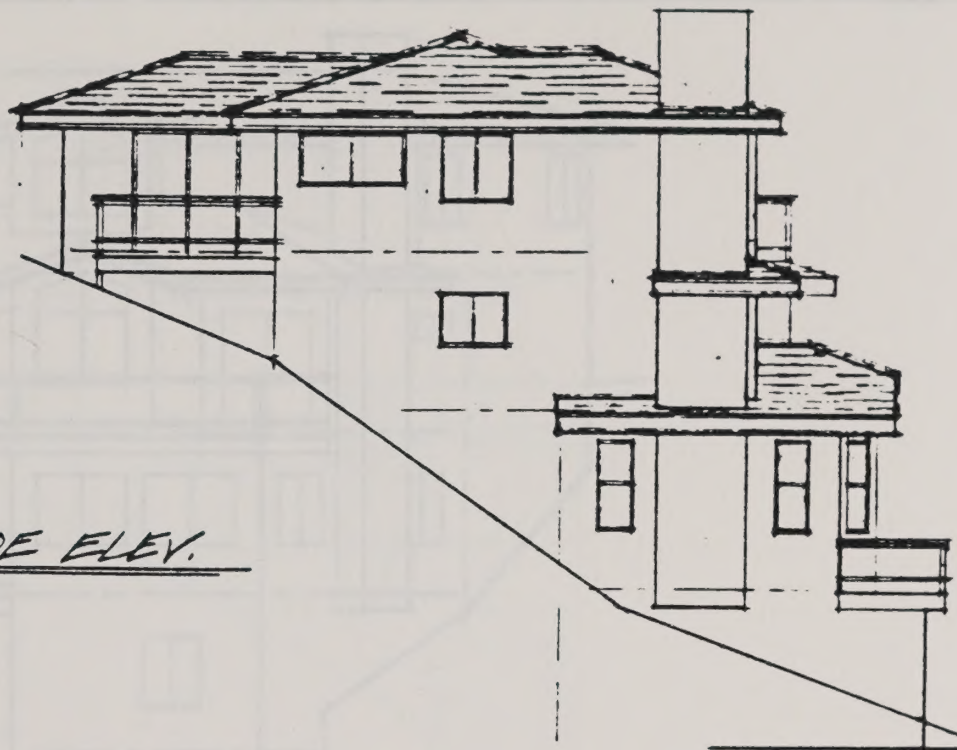
SCALE



FIGURE C-1 (CONTINUED)

LOT#13

LEFT SIDE ELEV.



RIGHT SIDE ELEV.

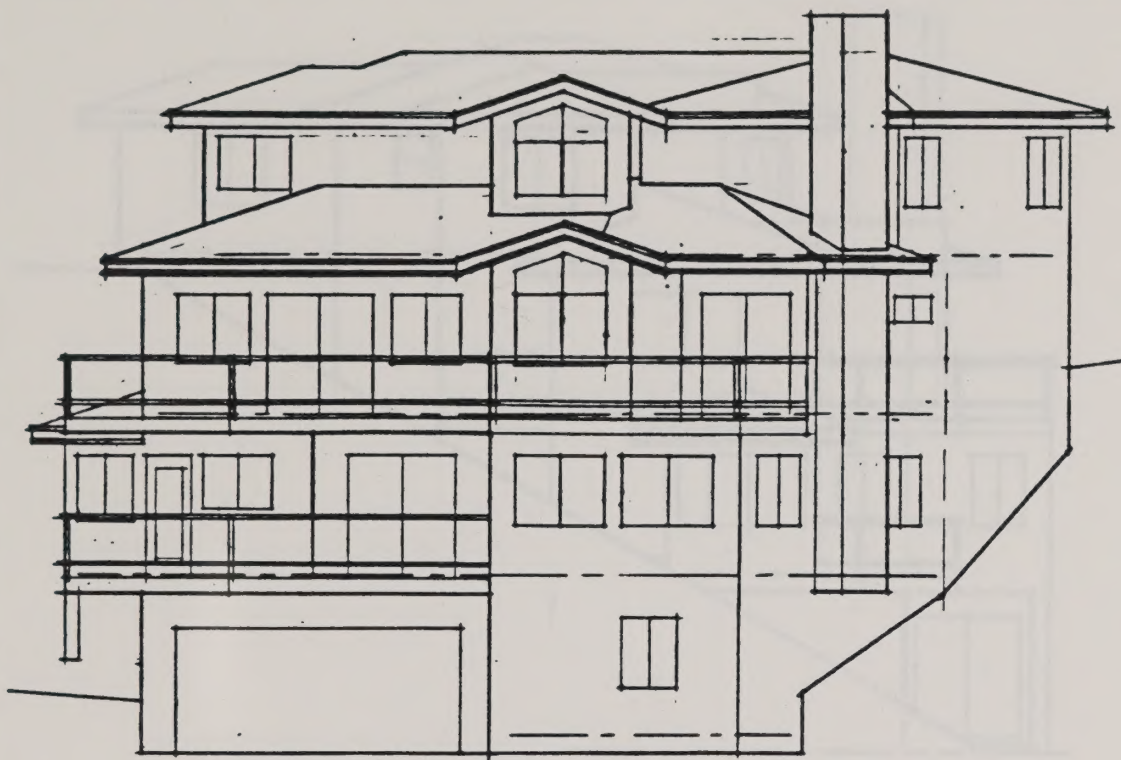


SCALE

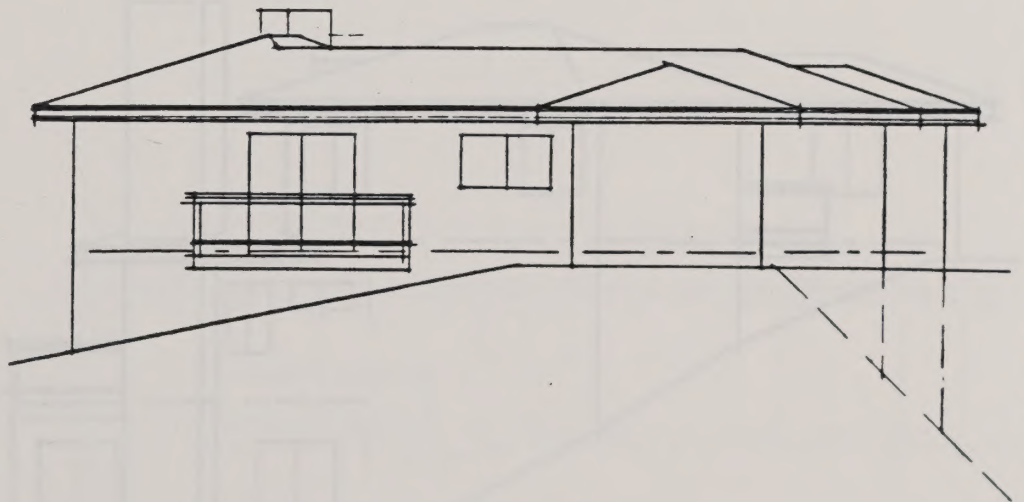


FIGURE C-1 (CONTINUED)

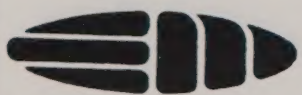
LOT#13



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE

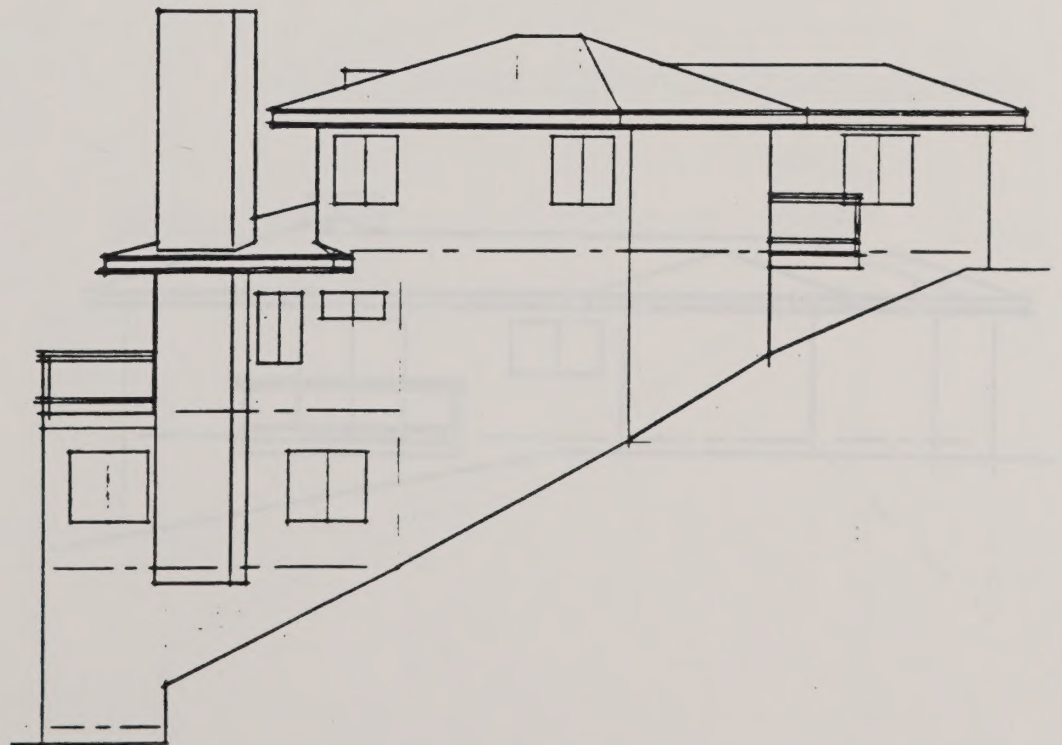


FIGURE C-1 (CONTINUED)

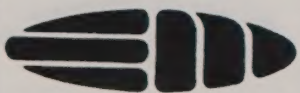
LOT #14



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics



SCALE

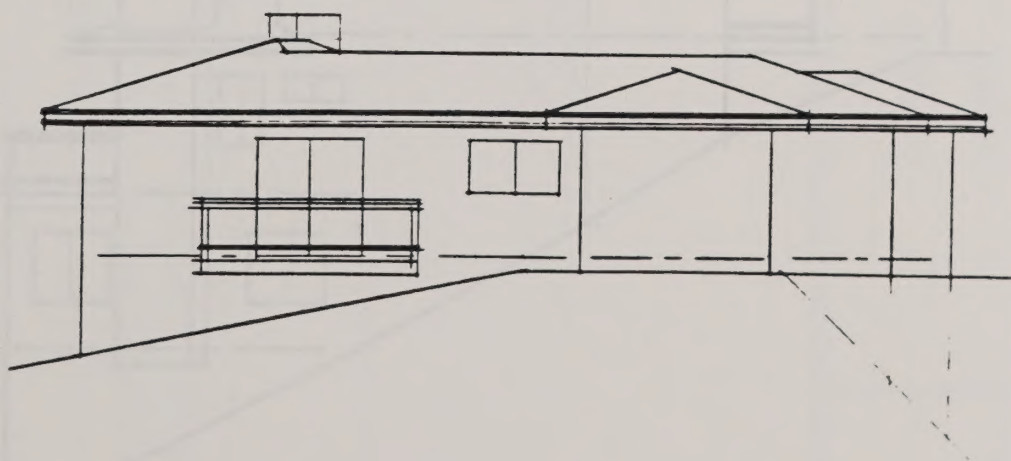
0 10 20 30

FIGURE C-1 (CONTINUED)

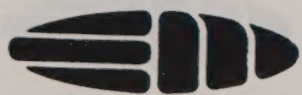
LOT#14



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE

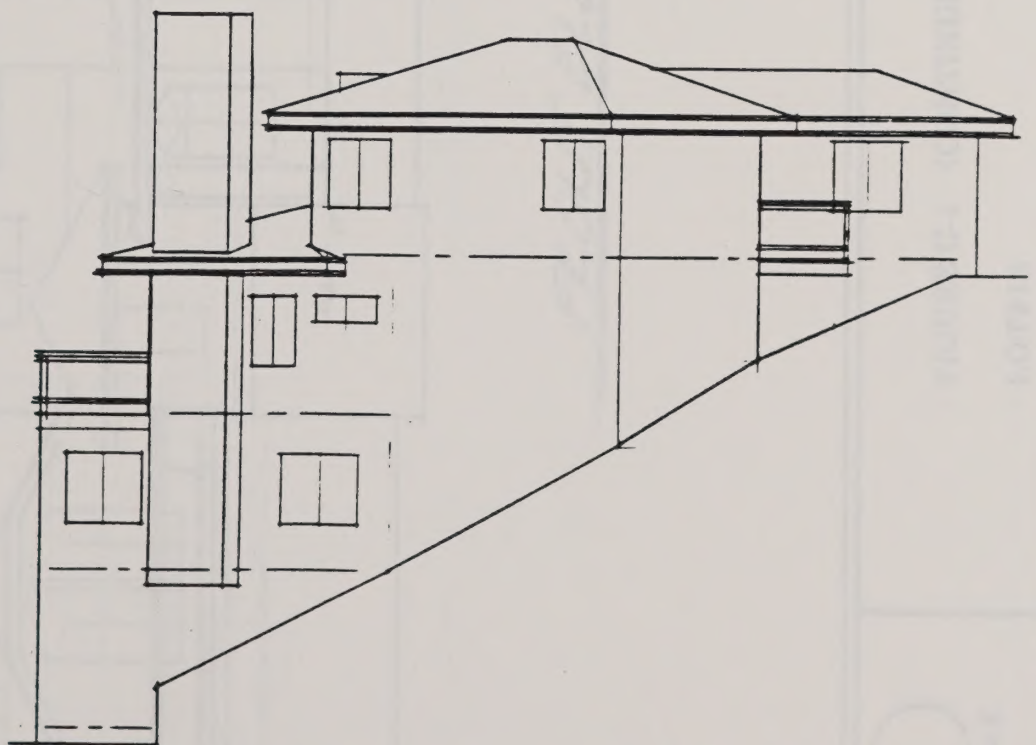


FIGURE C-1 (CONTINUED)

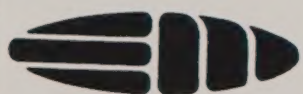
LOT#15



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics

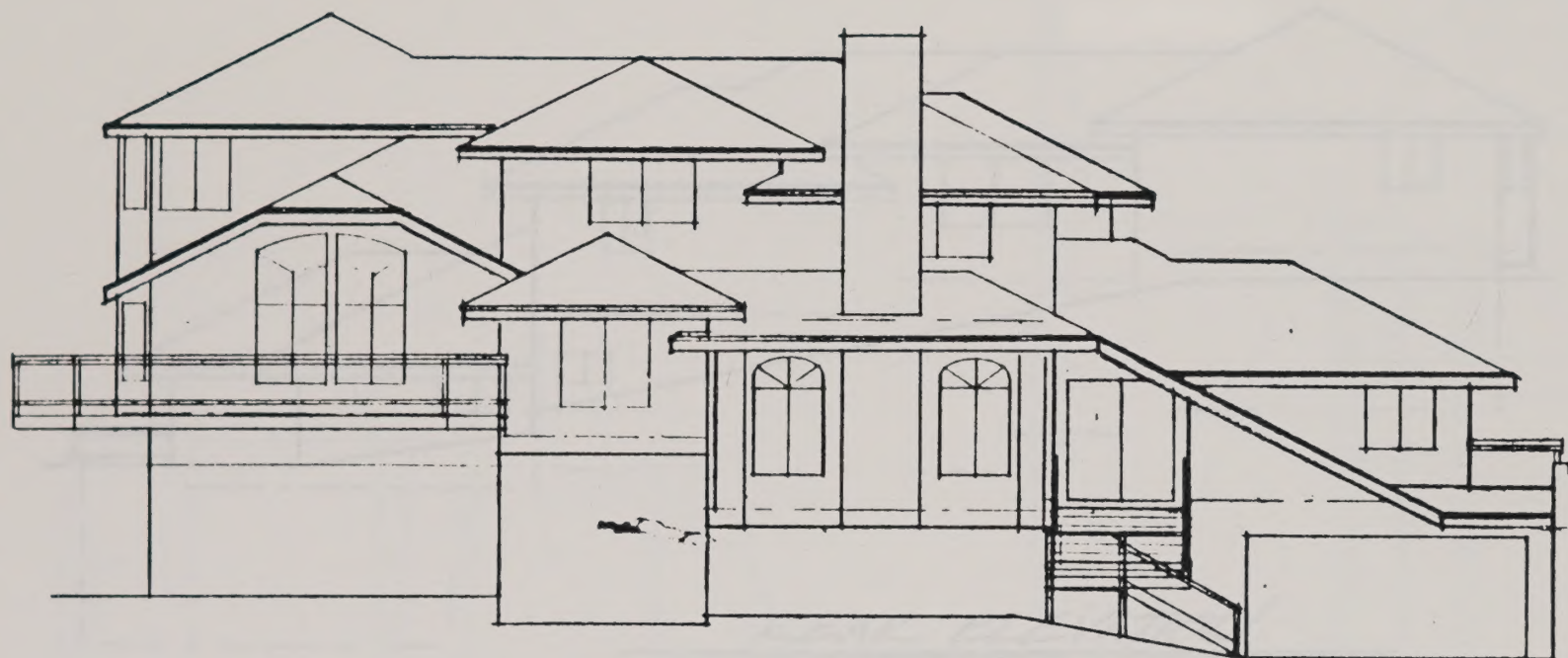


SCALE

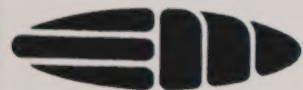


FIGURE C-1 (CONTINUED)

LOT#15



FRONT ELEVATION



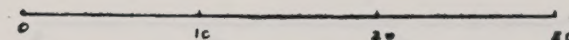
earth metrics

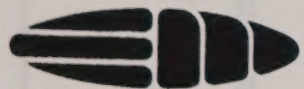
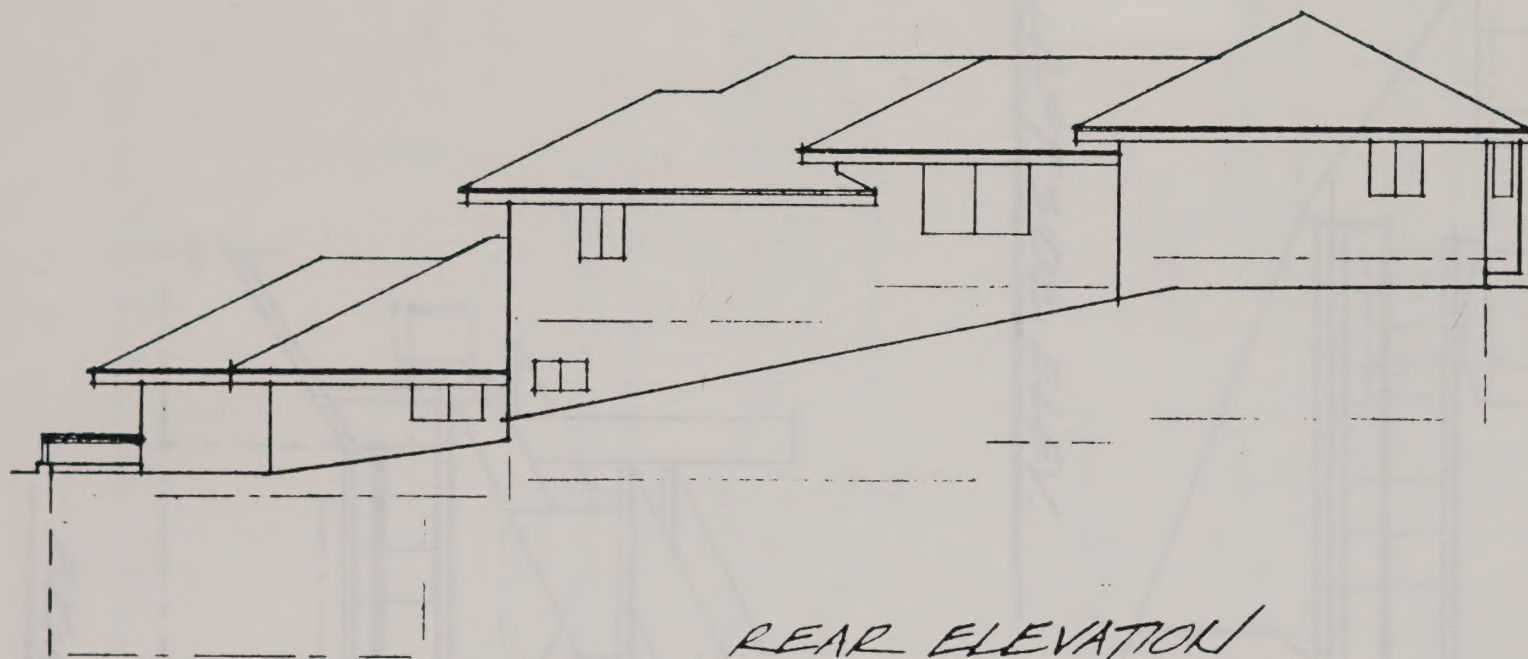


SCALE

FIGURE C-1 (CONTINUED)

LOT#16





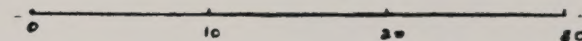
earth metrics

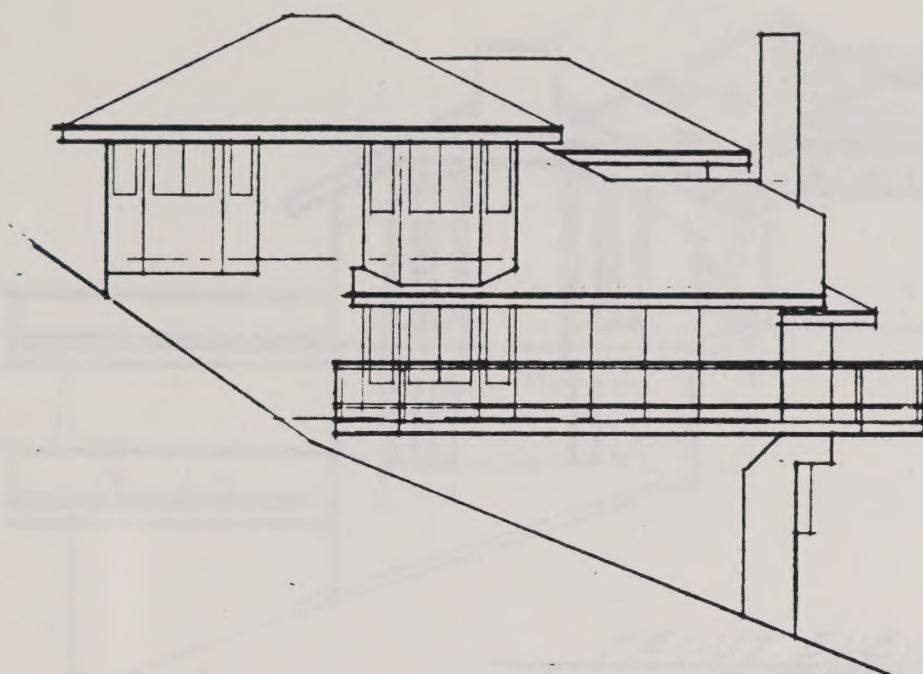


SCALE

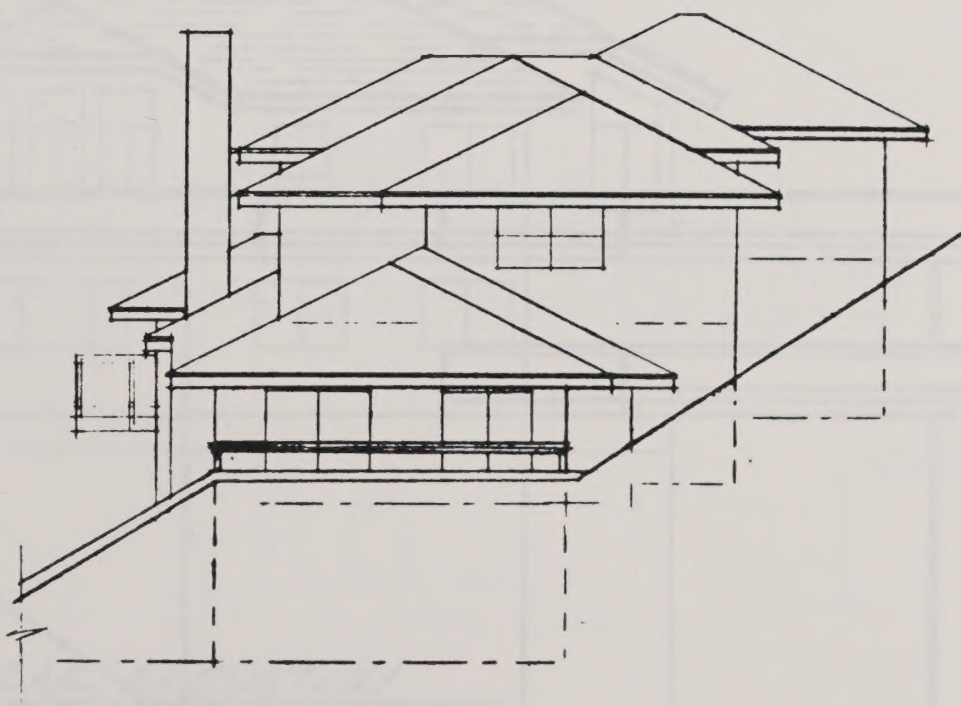
FIGURE C-1 (CONTINUED)

LOT#16

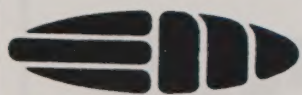




LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics



SCALE

0 10 20 30

FIGURE C-1 (CONTINUED)

LOT #16

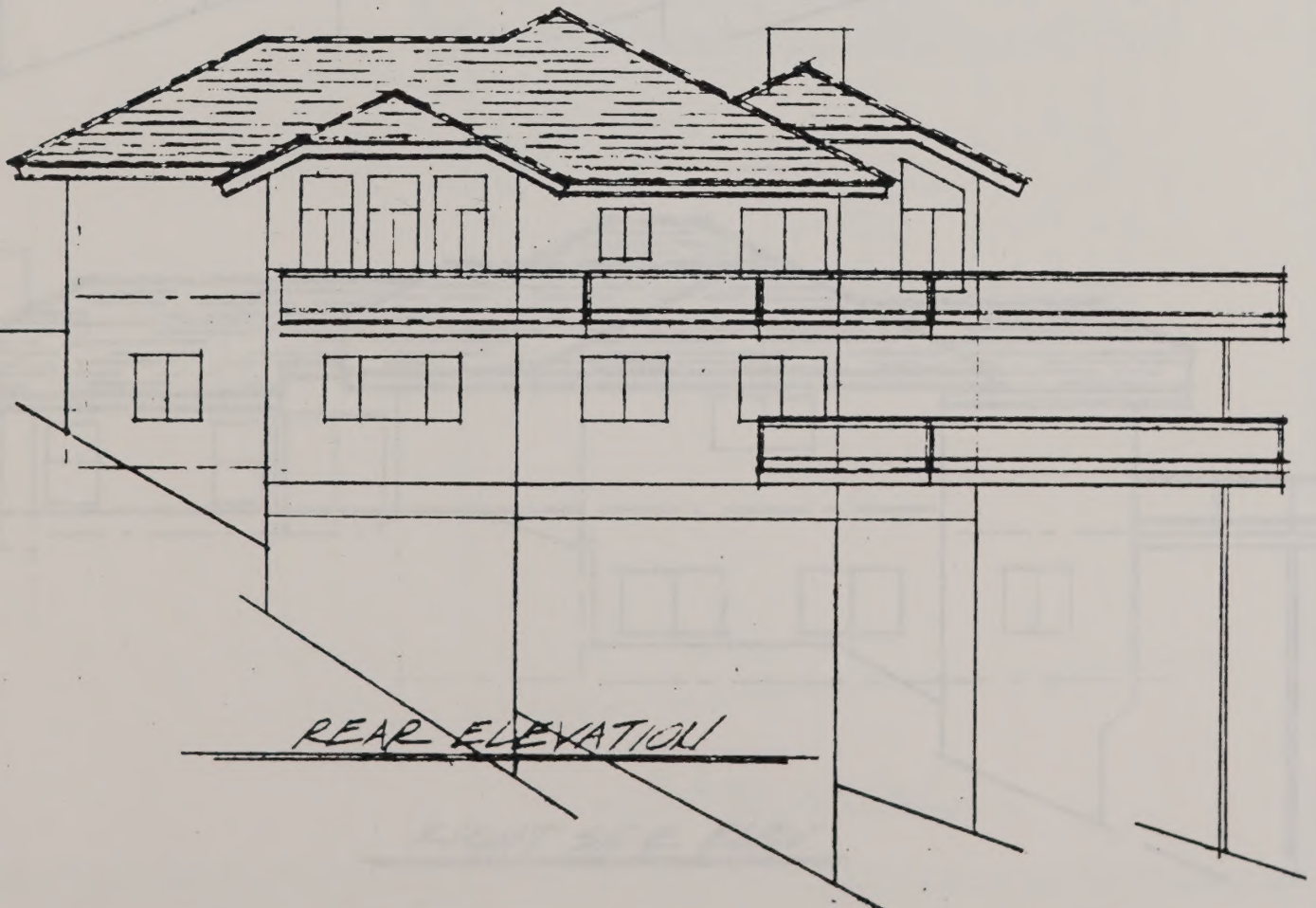
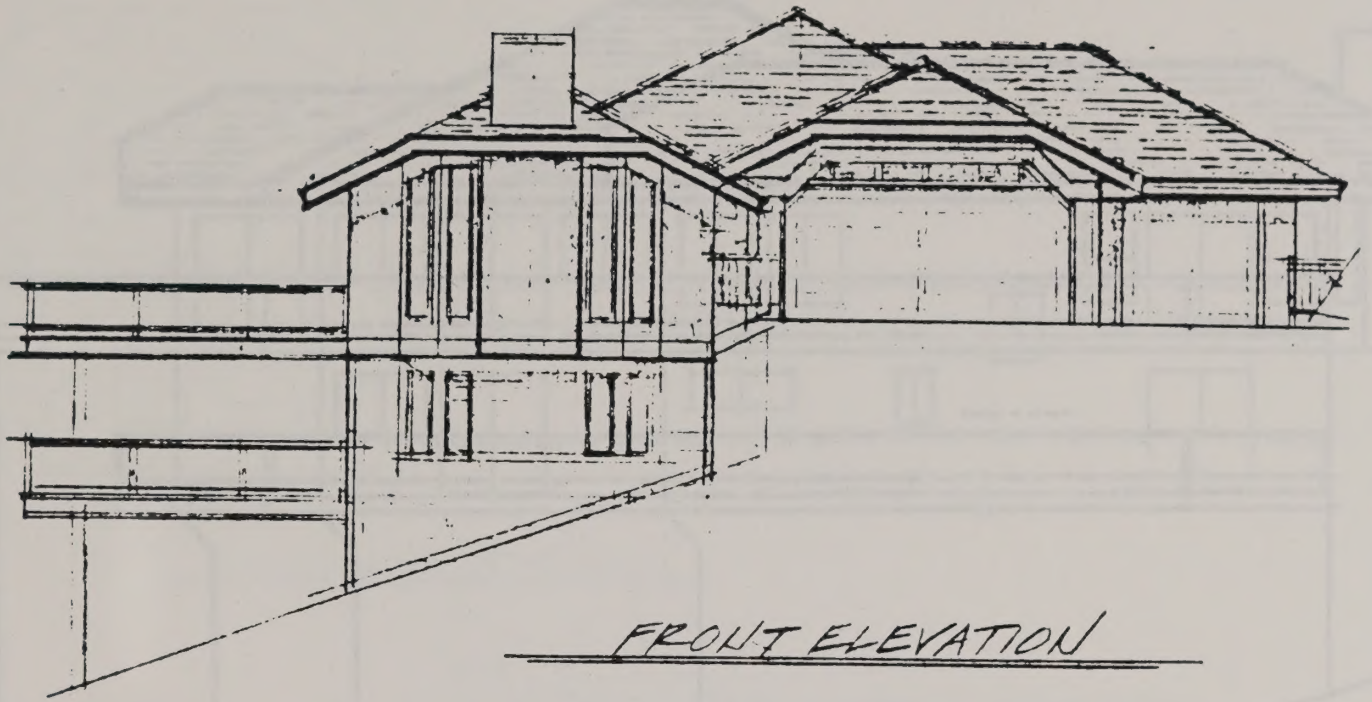
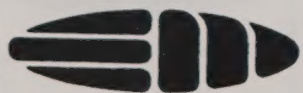
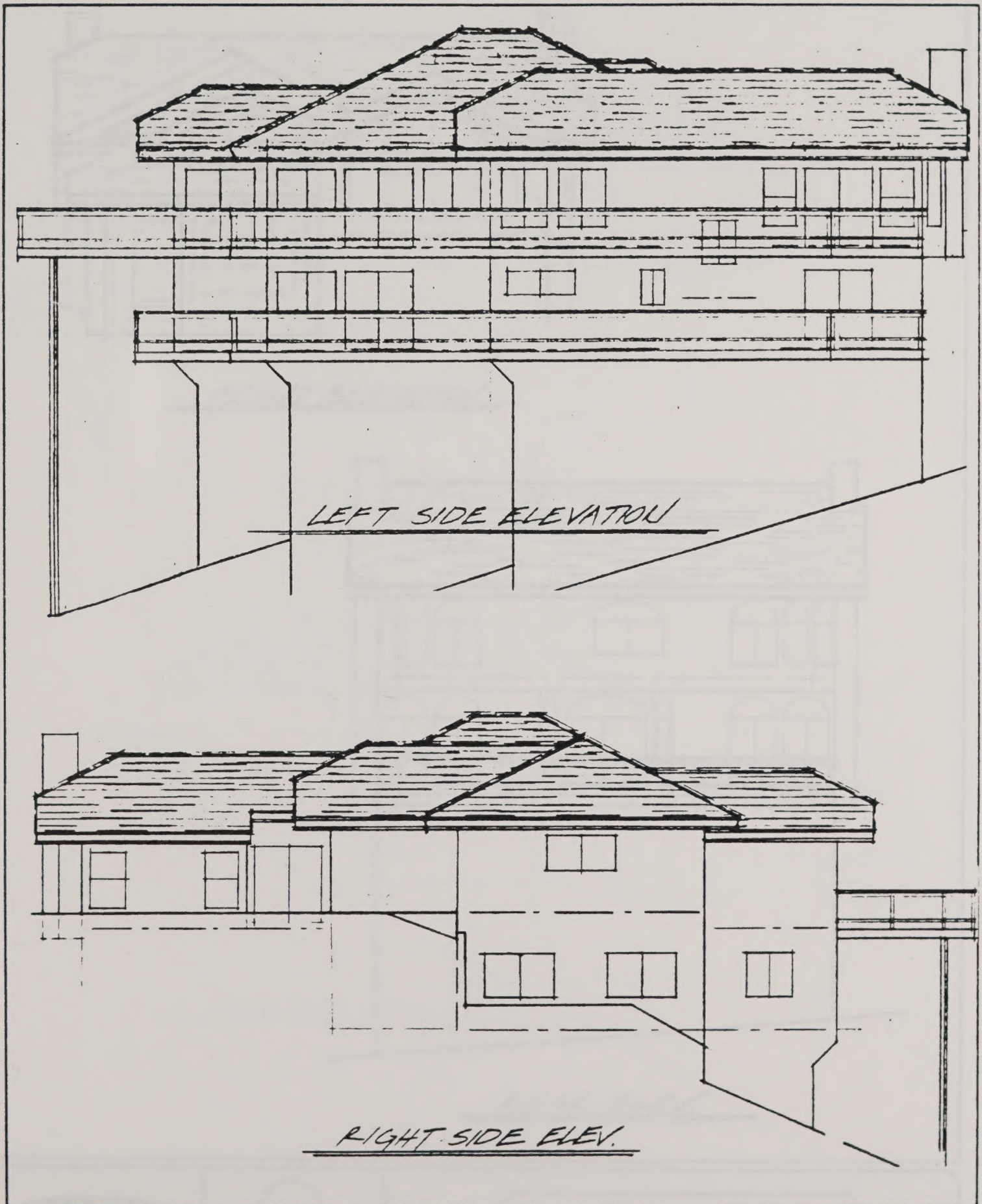


FIGURE C-1 (CONTINUED)

LOT#17



earth metrics

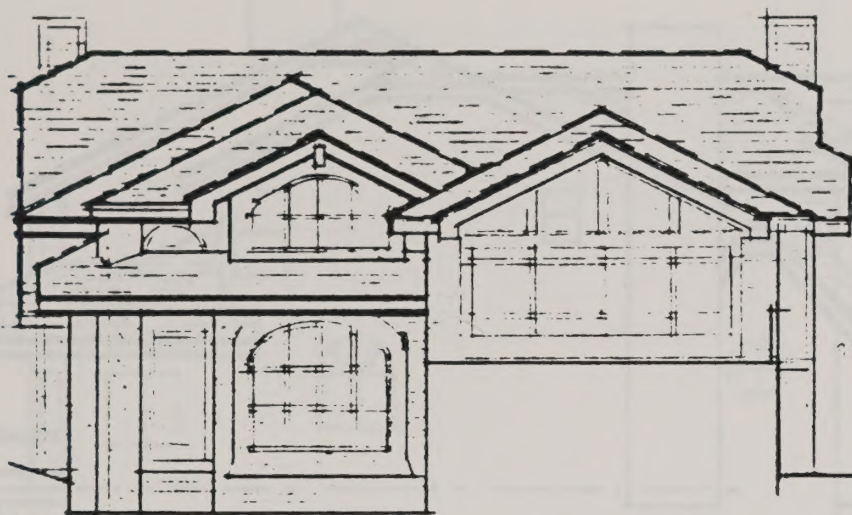


SCALE

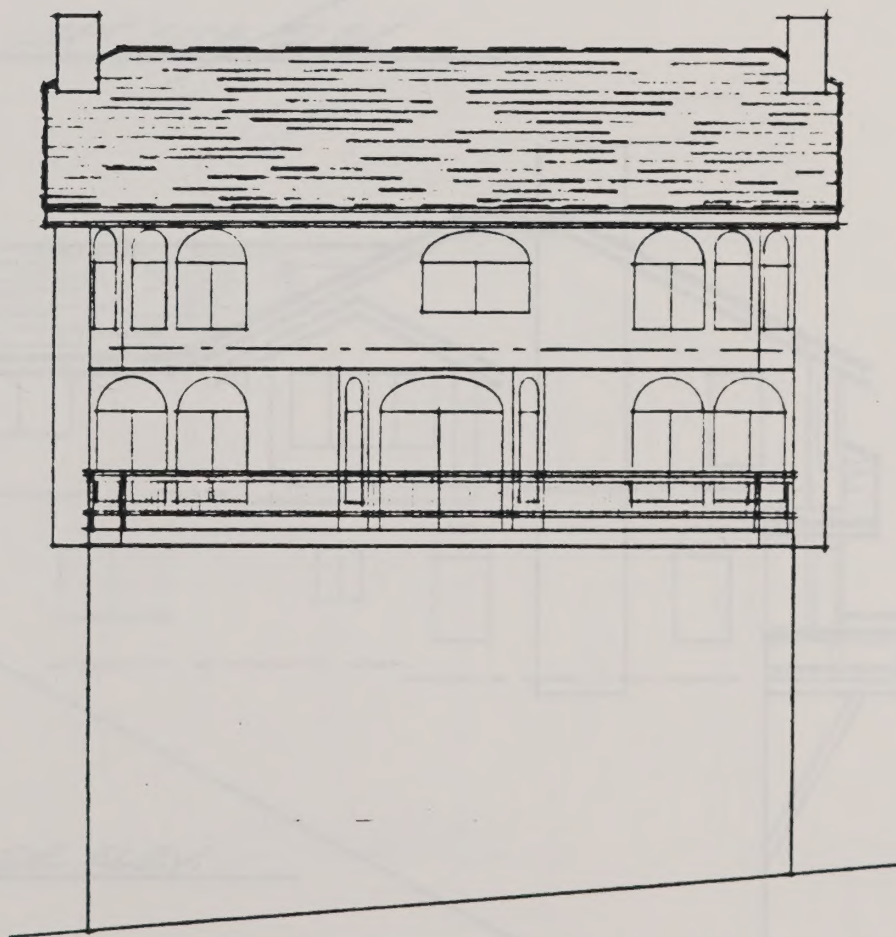
0 10 20 30

FIGURE C-1 (CONTINUED)

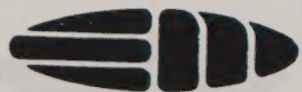
LOT#17



FRONT ELEVATION



REAR ELEV.



earth metrics

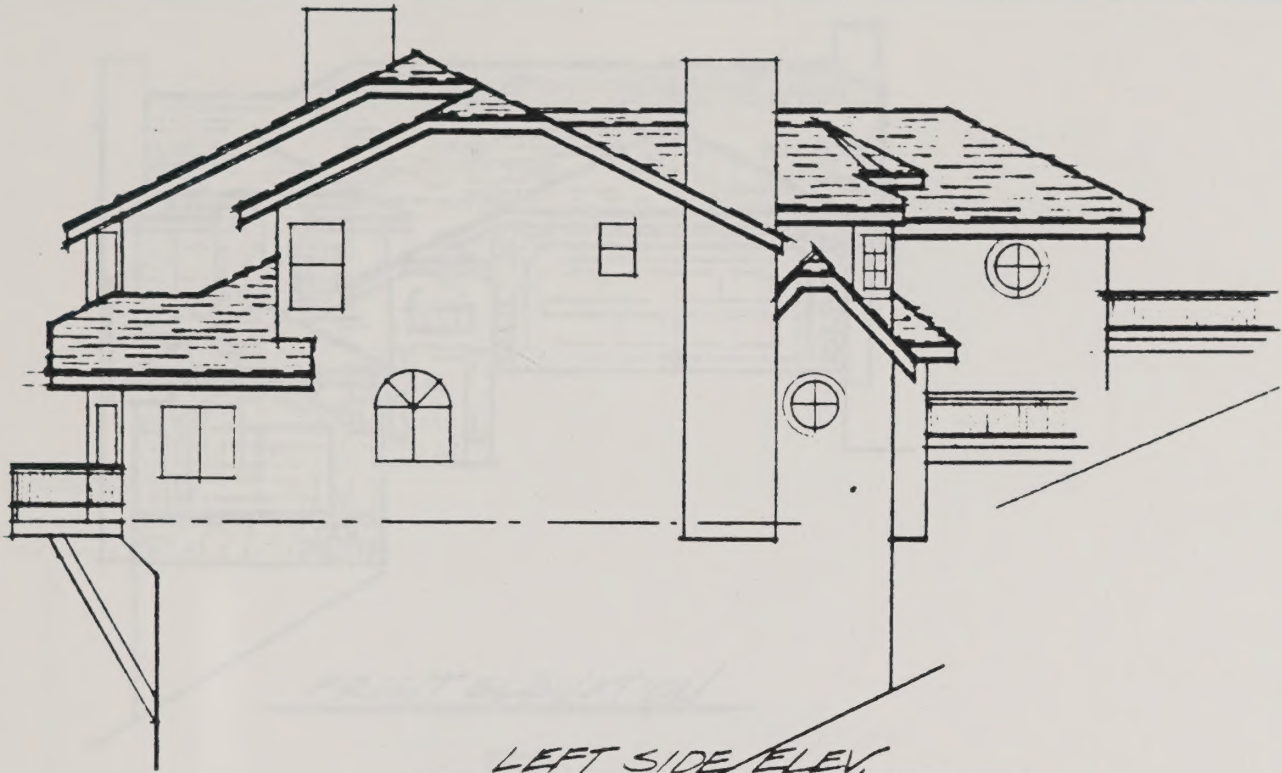


SCALE

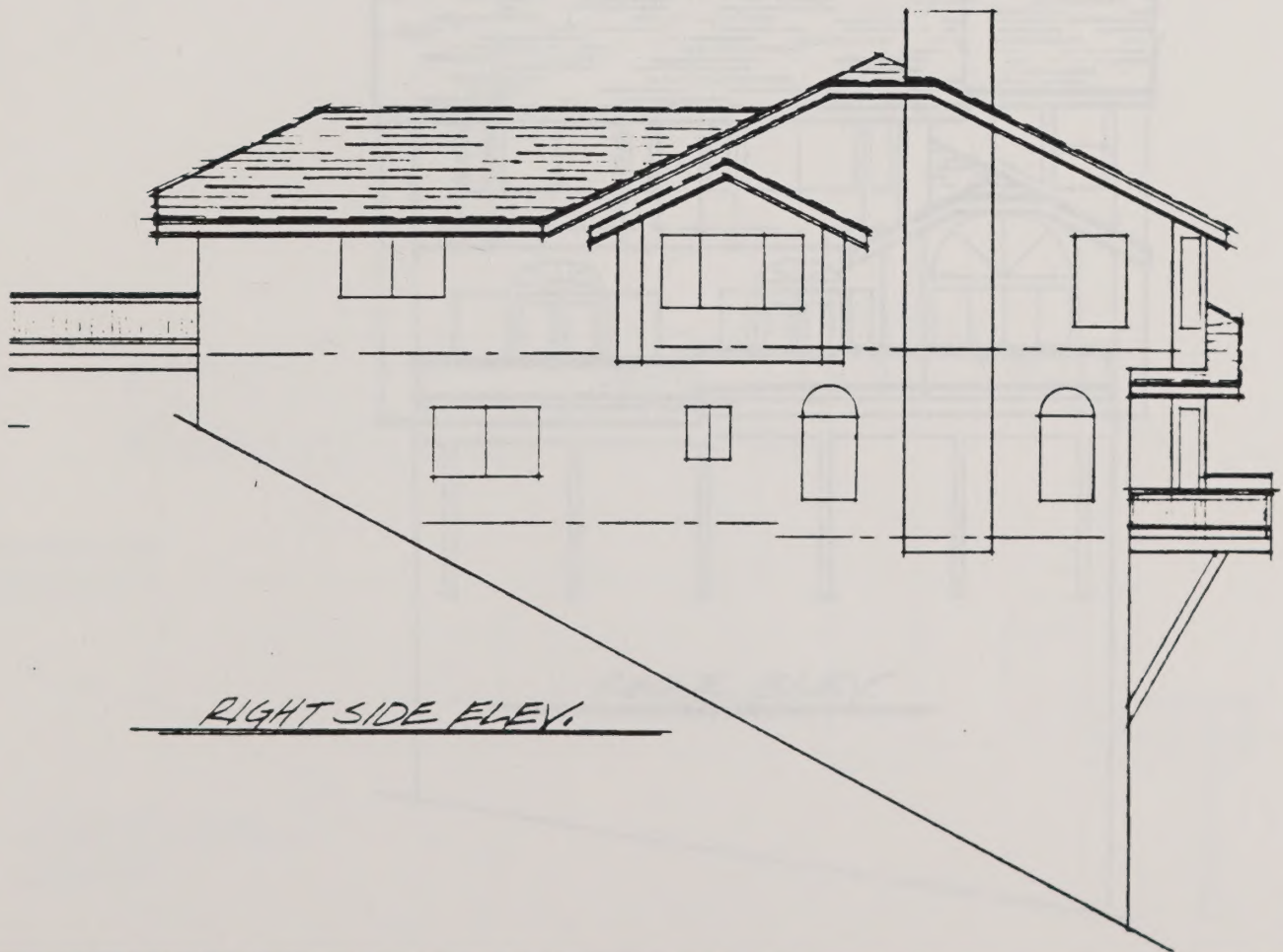


FIGURE C-1 (CONTINUED)

LOT#18



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



FIGURE C-1 (CONTINUED)
LOT#18

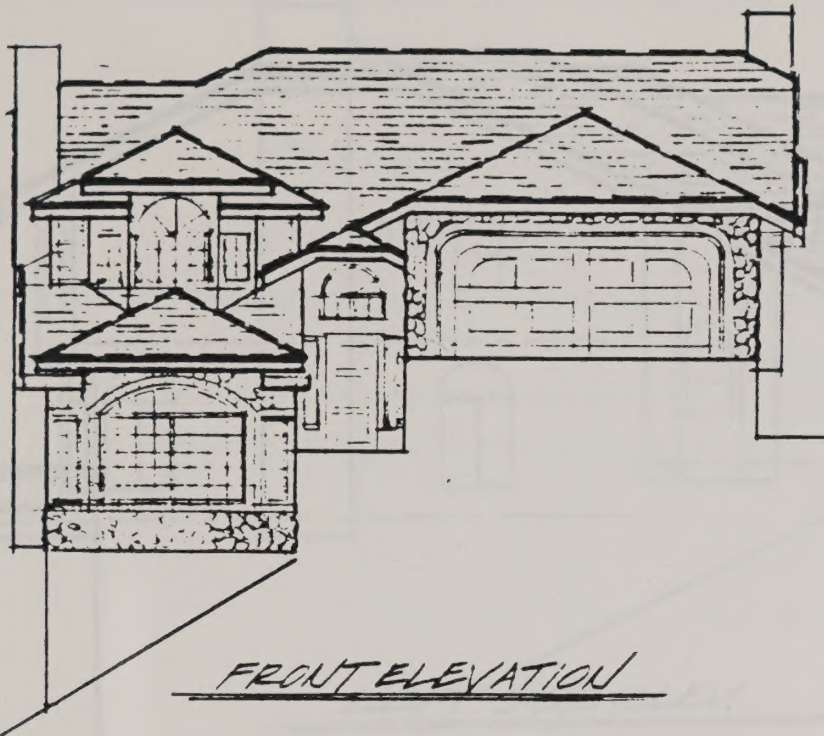
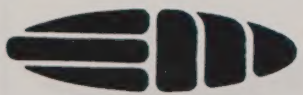
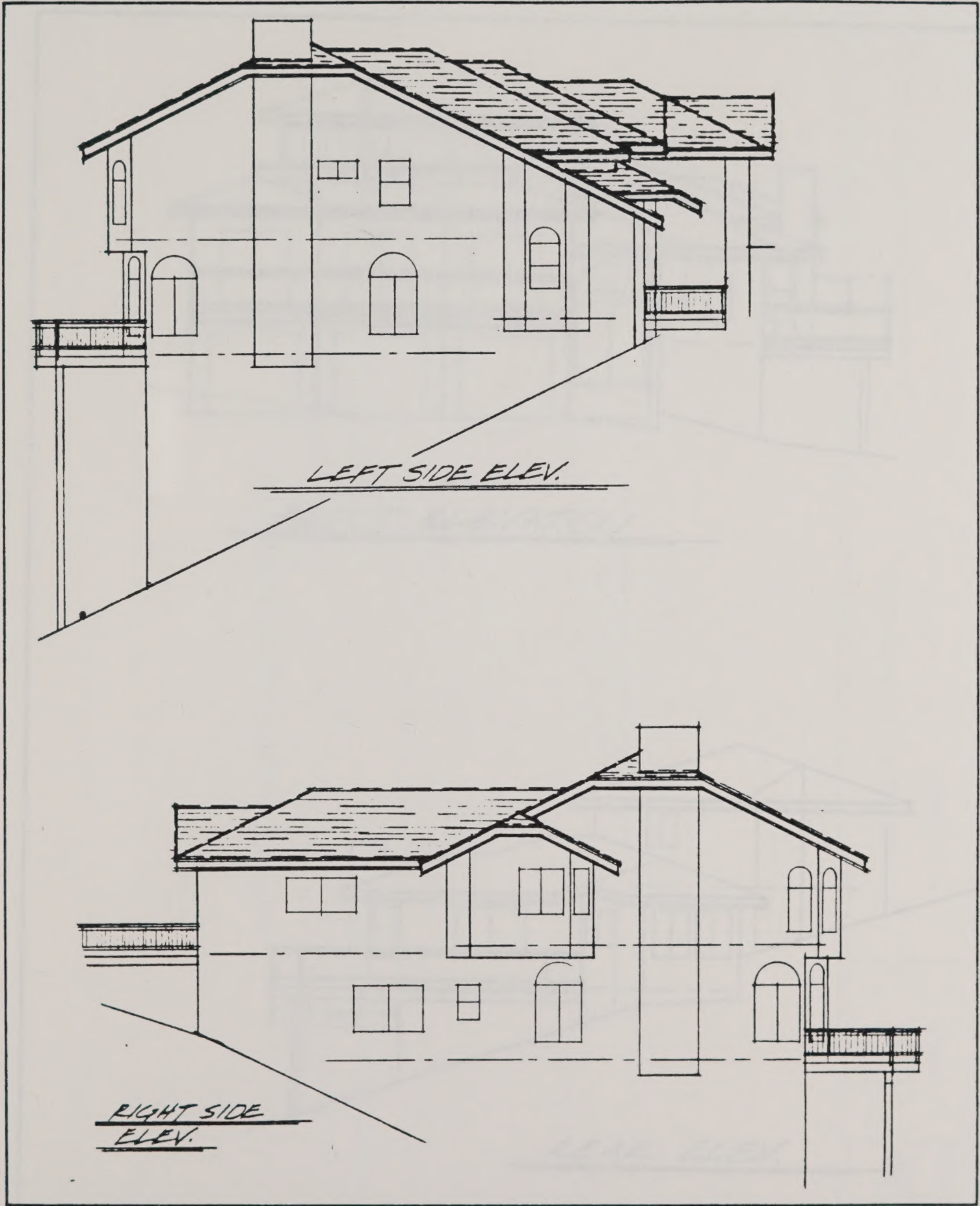


FIGURE C-1 (CONTINUED)

LOT#19



earth metrics

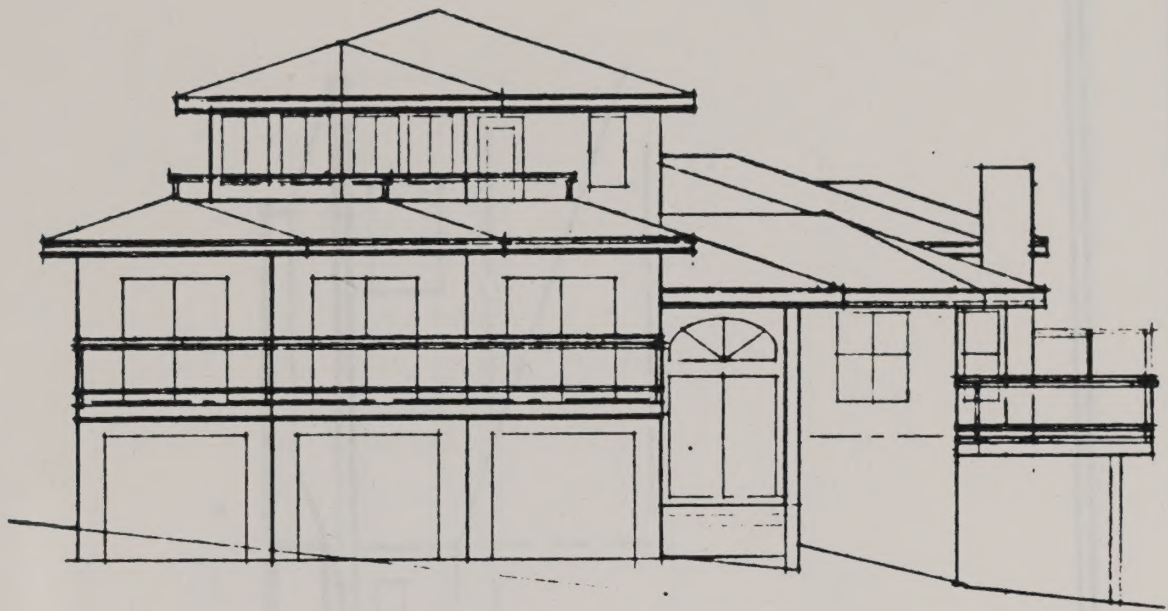


SCALE

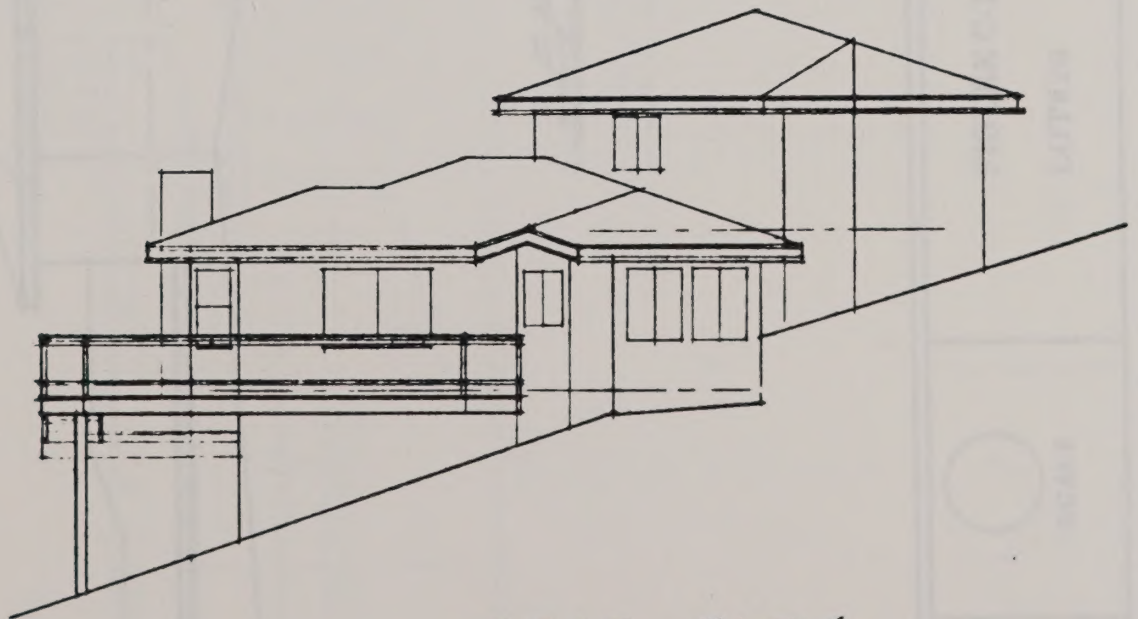


FIGURE C-1 (CONTINUED)

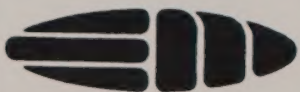
LOT#19



FRONT ELEVATION



REAR ELEV.



earth metrics

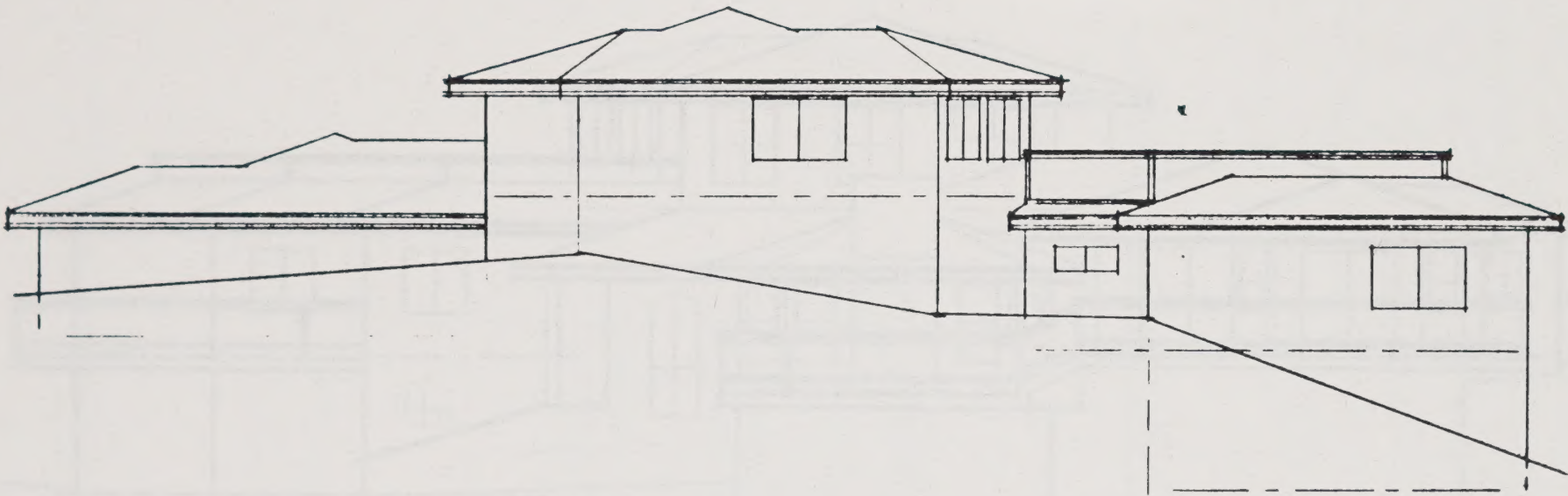


SCALE

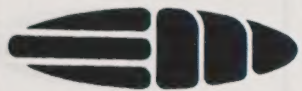


FIGURE C-1 (CONTINUED)

LOT #20



LEFT SIDE ELEV.



earth metrics

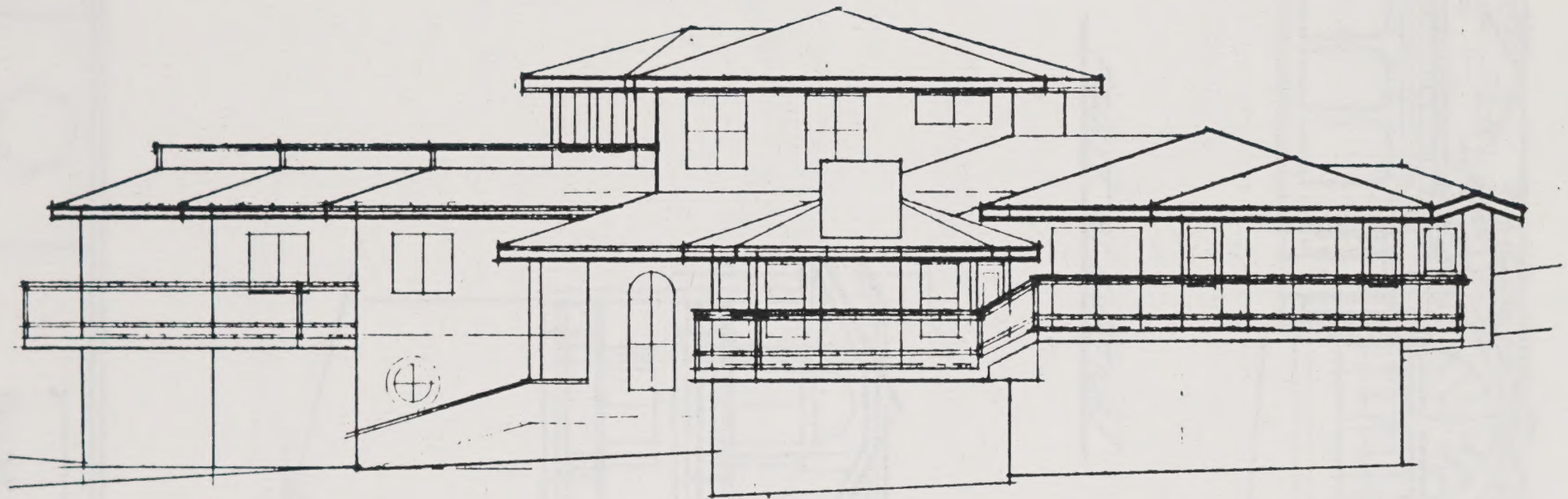


SCALE

FIGURE C-1 (CONTINUED)

LOT#20

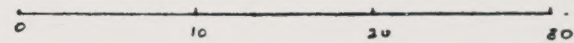


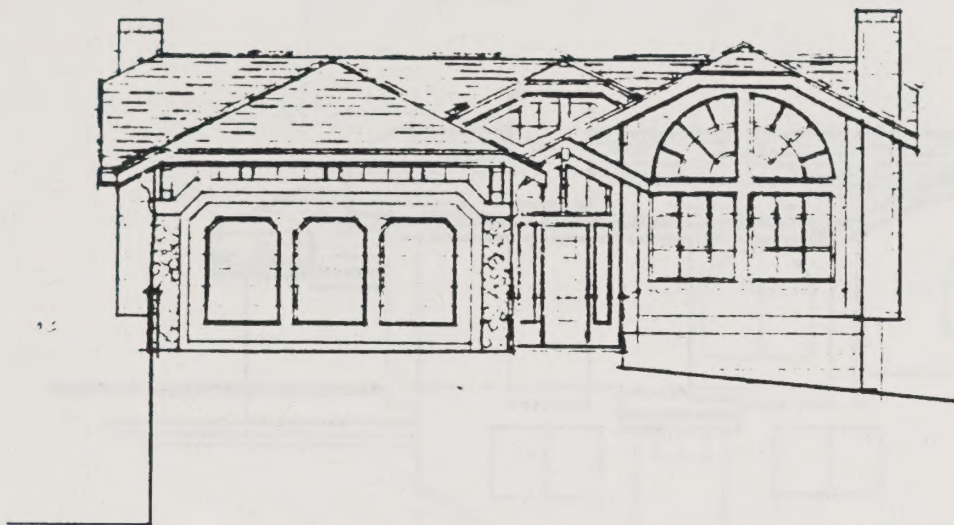


RIGHT SIDE ELEV.

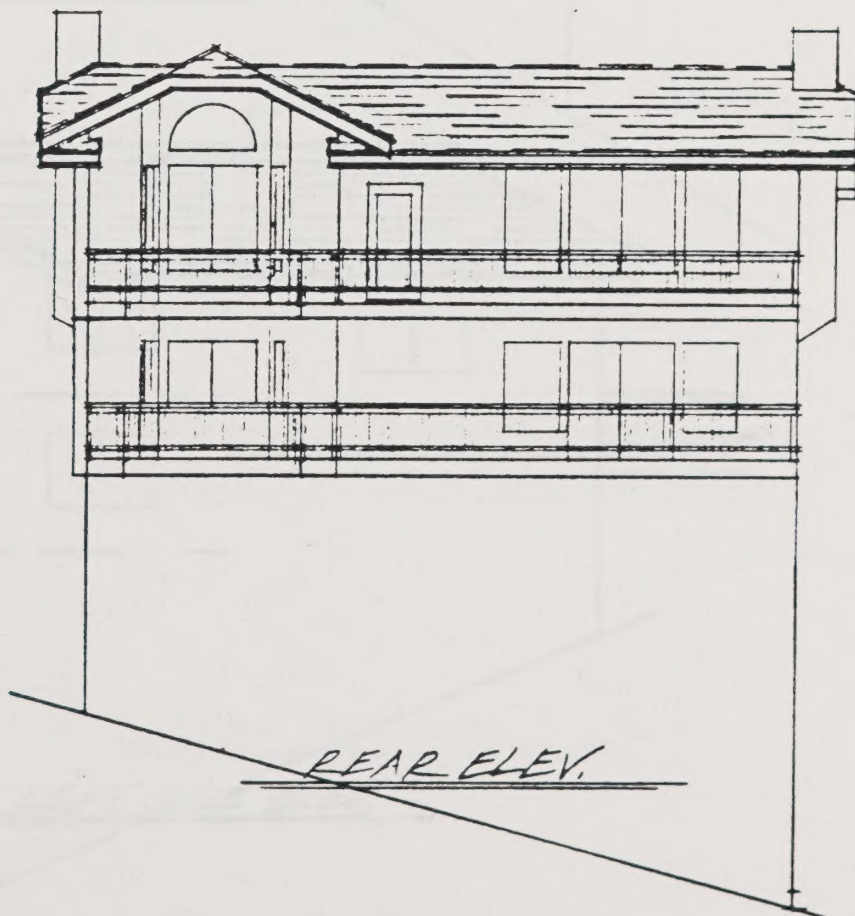


FIGURE C-1 (CONTINUED)
LOT#20

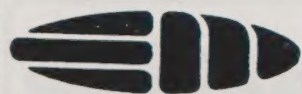




FRONT ELEVATION



REAR ELEV.



earth metrics

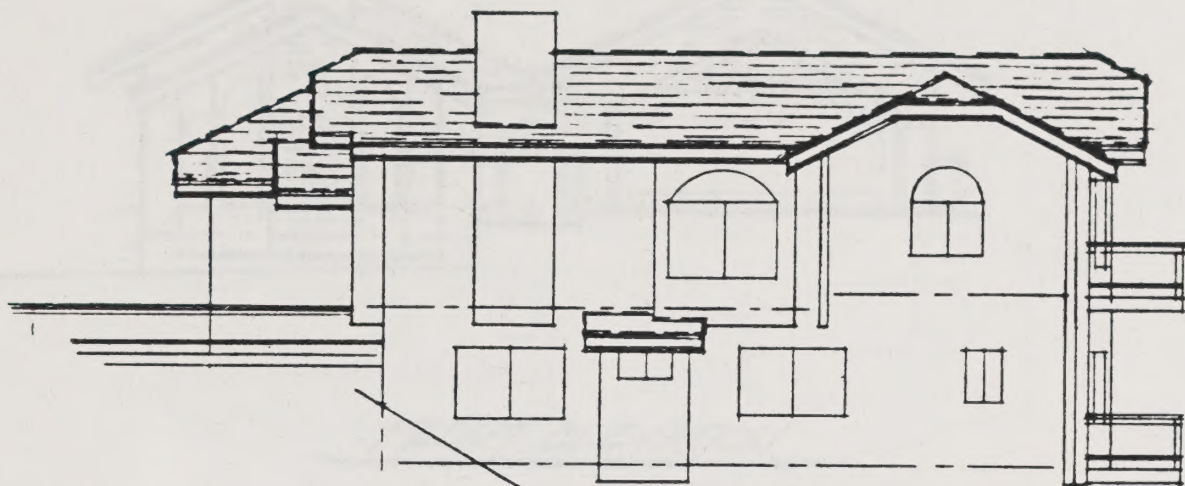


SCALE



FIGURE C-1 (CONTINUED)

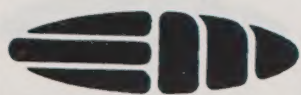
LOT#21



RIGHT SIDE ELEV.



LEFT SIDE ELEV.



earth metrics

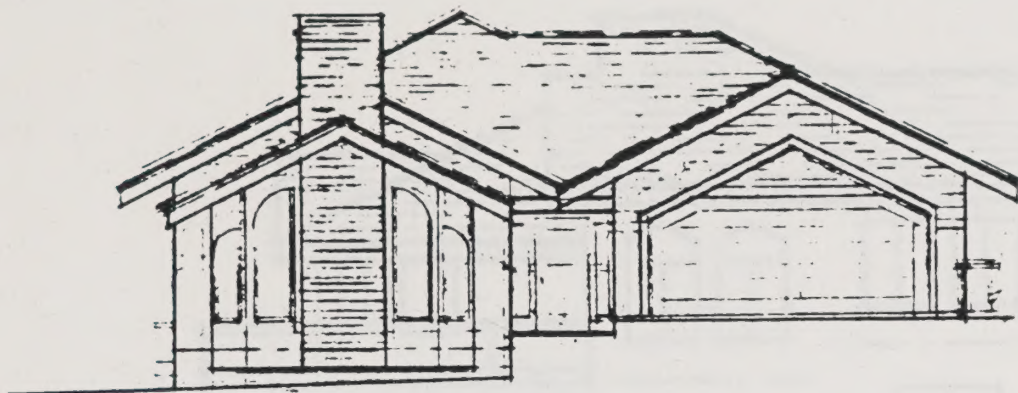


SCALE

0 10 20 40

FIGURE C-1 (CONTINUED)

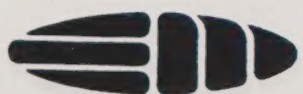
LOT #21



FRONT ELEVATION



REAR ELEVATION



earth metrics



SCALE

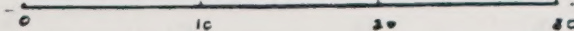
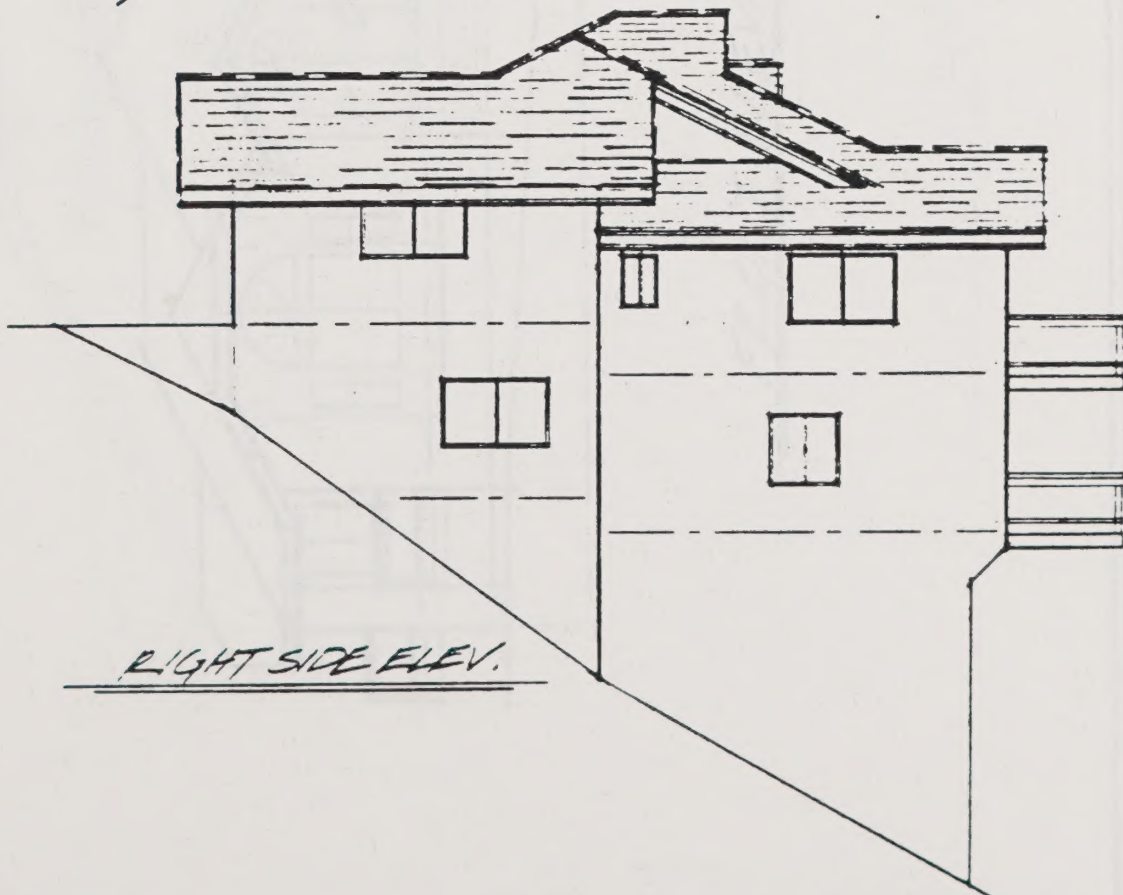


FIGURE C-1 (CONTINUED)

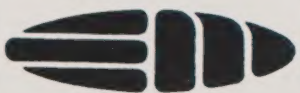
LOT#22



LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics

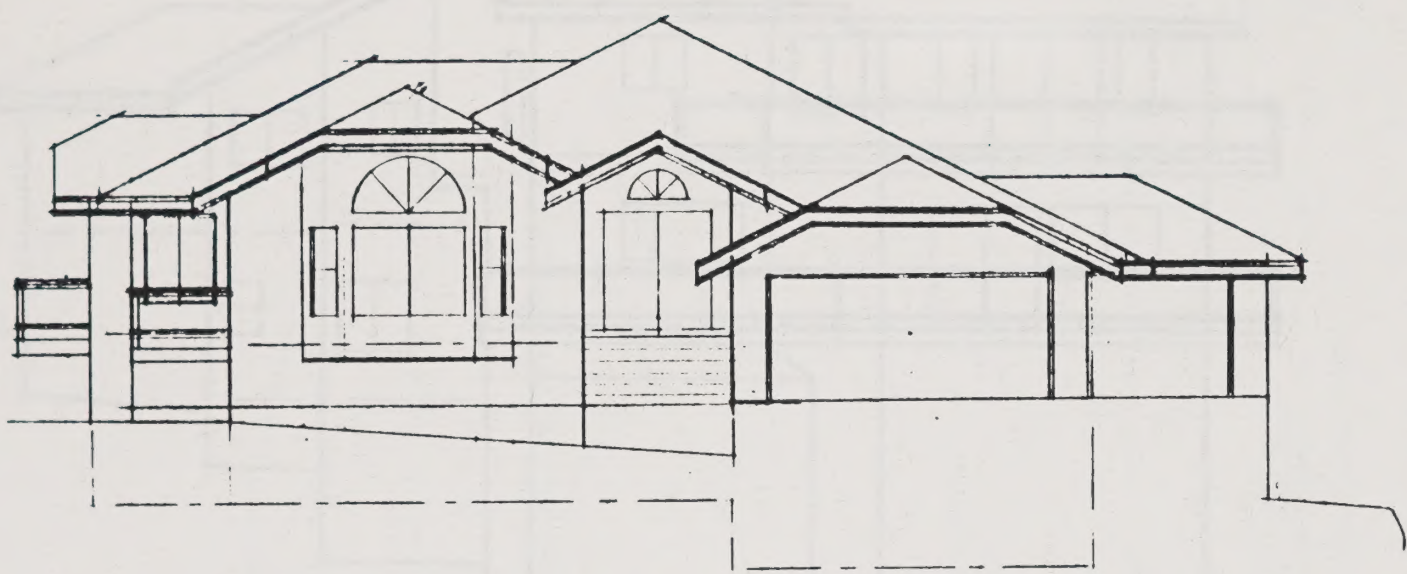


SCALE



FIGURE C-1 (CONTINUED)

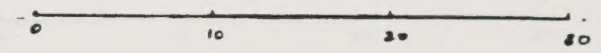
LOT#22

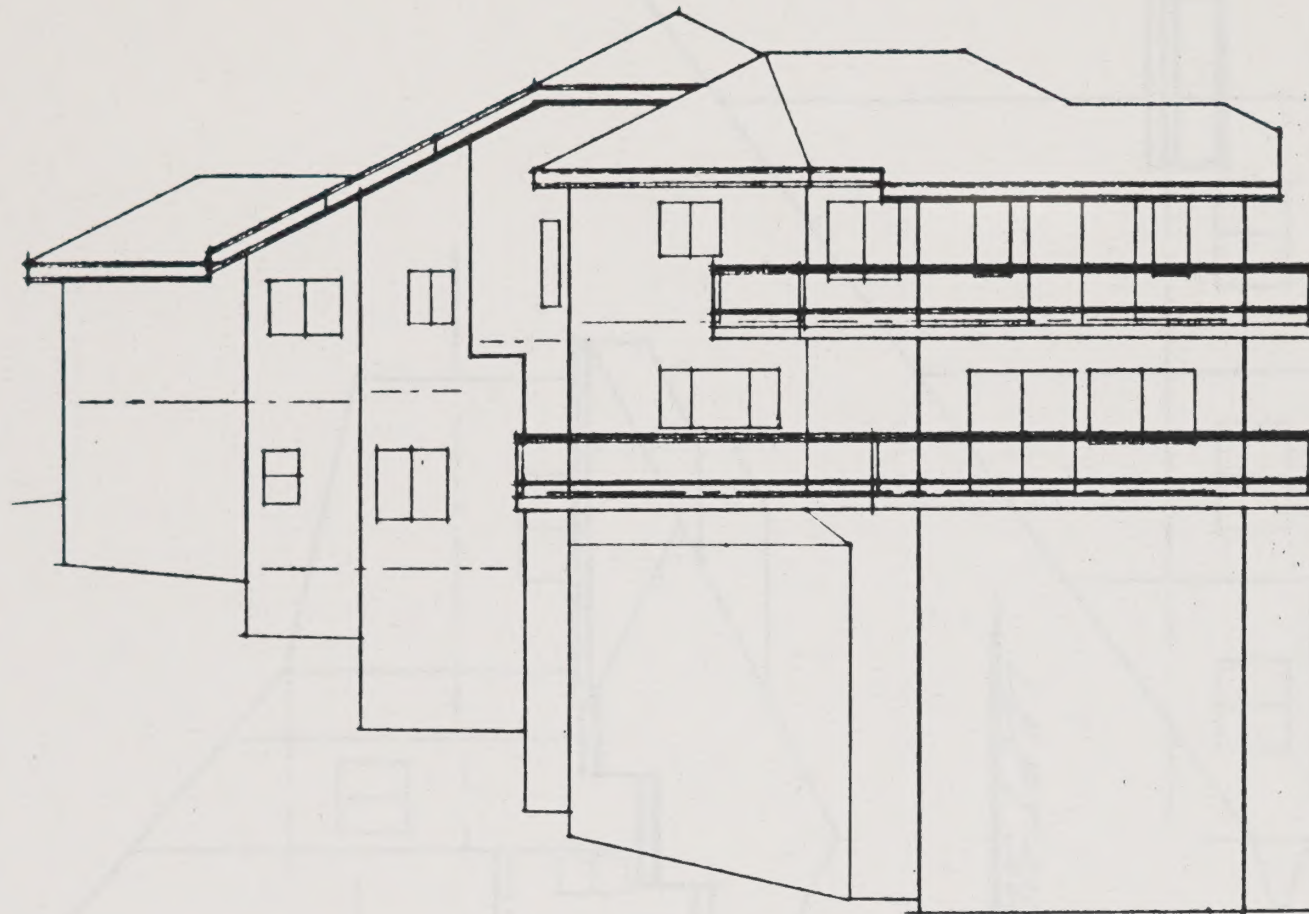


FRONT ELEVATION



FIGURE C-1 (CONTINUED)
LOT#23





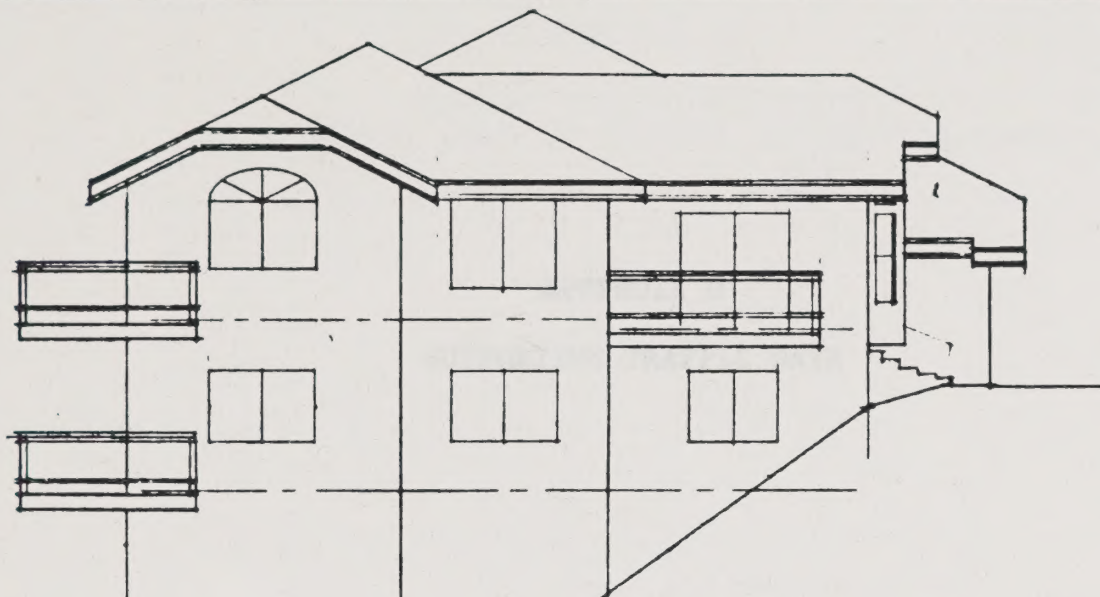
REAR ELEVATION



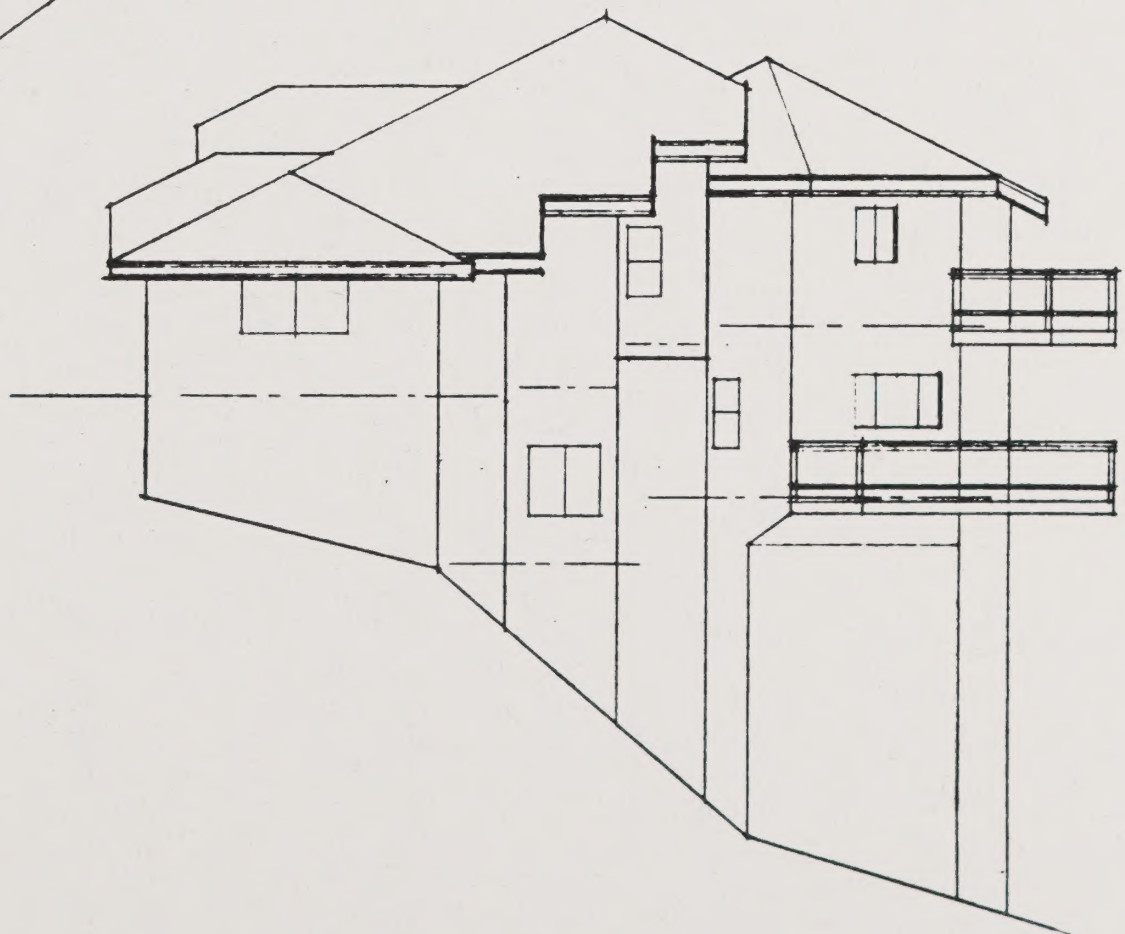
FIGURE C-1 (CONTINUED)

LOT#23

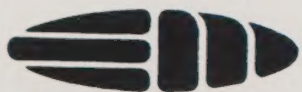




LEFT SIDE ELEV.



RIGHT SIDE ELEV.



earth metrics



SCALE



FIGURE C-1 (CONTINUED)

LOT#23

APPENDIX D
SUPPORTING TRAFFIC DATA

APPENDIX D1

TRAFFIC COUNTS DATA SHEET AND EXISTING LEVEL OF SERVICE CALCULATION SHEETS

LOCATION 12th & Main DATE 6-11-71 WEATHER Sunny
 RECORDING 5 min / CLS
 REMARKS

TIME	FROM NORTH SB ON	FROM SOUTH NB ON	FROM EAST WB ON	FROM WEST EB ON
5:00 - 5:15 AM	5	10	16	12
5:15 - 5:30 AM	7	14	17	13
5:30 - 5:45 AM	5	15	15	12
5:45 - 6:00 AM	1	17	13	11
6:00 - 6:15 AM	6	17	18	10
6:15 - 6:30 AM	6	18	13	11
6:30 - 6:45 AM	12	18	14	11
6:45 - 7:00 AM	10	15	11	10
Total (from above)	34	114	74	53

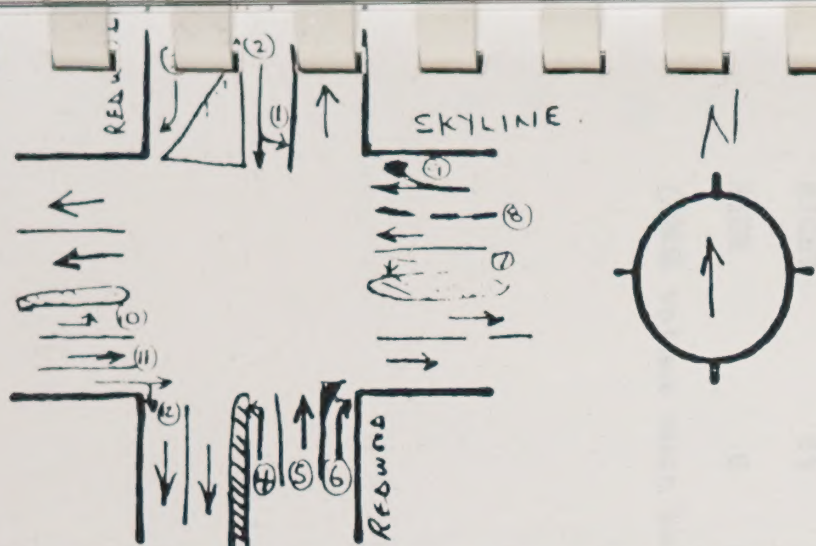
INTERSECTION STUDY (P)

LOCATION REDWOOD ROAD / SKYLINE, CARLETON

DATE 6-11-91 WEATHER CLEAR SUNNY

RECORDER SMM / CLS

REMARKS _____



VEHICLES — PEDESTRIANS —	FROM NORTH SB ON				FROM SOUTH NB ON REDWOOD				FROM EAST WB ON SKYLINE				FROM WEST EB ON				TOTAL ALL	HR. VOLUME ENDING AT
LOCATION	①	②	③		④	⑤	⑥		⑦	⑧	⑨		⑩	⑪	⑫			
TIME	L.	S.	R.	APPROX TOTAL	L.	S.	R.	APPROX TOTAL	L.	S.	R.	APPROX TOTAL	L.	S.	R.	APPROX TOTAL	TOTAL ALL	HR. VOLUME ENDING AT
4:00 - 4:15 pm	5	27	14	46	10	20	16	46	16	18	5	39	2	4	1	7		
4:15 - 4:30 pm	7	22	19	48	24	21	24	69	14	17	6	37	3	8	8	19		
4:30 - 4:45 pm	5	19	17	41	15	20	33	68	21	15	2	38	2	2	5	9		
4:45 - 5:00 pm	1	26	20	47	17	17	38	72	23	15	1	39	1	15	4	20		
5:00 - 5:15 pm	6	42	22	70	19	20	25	64	18	18	3	39	0	7	5	12	185	
5:15 - 5:30 pm	6	25	18	49	17	28	34	79	13	13	2	28	1	9	6	16	172	357
5:30 - 5:45 pm	12	28	14	54	16	30	43	89	21	14	1	36	1	9	2	12	191	548
5:45 - 6:00 pm	10	35	9	54	14	30	42	86	22	7	1	30	0	7	0	7	177	725
TOTAL (PER HOUR)	34	130	63	227	66	108	144	318	74	52	7	133	2	32	13	47	725	

1985 HCM: SIGNALIZED INTERSECTIONS

Page-1

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET.....SKYLINE BOULEVARD

NAME OF THE NORTH/SOUTH STREET.....REDWOOD ROAD

AREA TYPE.....OTHER

NAME OF THE ANALYST.....PAUL AWOSIKA

DATE OF THE ANALYSIS.....04/03/92

TIME PERIOD ANALYZED.....5.00 TO 6.00 PM

OTHER INFORMATION:

EXISTING TRAFFIC VOLUME BASED ON JUNE/11/91 COUNTS

TRAFFIC VOLUMES

	EB	WB	NB	SB
	----	----	----	----
LEFT	34	74	66	2
THRU	130	52	108	32
RIGHT	63	7	144	13
RTOR	0	0	0	0

(RTOR volume must be less than or equal to RIGHT turn volumes.)

1985 HCM: SIGNALIZED INTERSECTIONS

SUMMARY REPORT

INTERSECTION..SKYLINE BOULEVARD/REDWOOD ROAD

AREA TYPE.....OTHER

ANALYST.....PAUL AWOSIKA

DATE.....04/03/92

TIME.....5.00 TO 6.00 PM

COMMENT.....EXISTING TRAFFIC VOLUME BASED ON JUNE/11/91 COUNTS

VOLUMES					GEOMETRY						
	EB	WB	NB	SB	:	EB	WB	NB	SB		
LT	34	74	66	2	:	L 12.0	L 12.0	LT 12.0	LT 12.0		
TH	130	52	108	32	:	T 12.0	T 12.0	T 12.0	R 12.0		
RT	63	7	144	13	:	TR 12.0	R 12.0	R 12.0			
RR	0	0	0	0	:	12.0	12.0	12.0			
					:	12.0	12.0	12.0			
					:	12.0	12.0	12.0			

ADJUSTMENT FACTORS										
	GRADE	HV	ADJ	PKG	BUSES	PHF	PEDS	PED.	BUT.	ARR. TYPE
	(%)	(%)	Y/N	Nm	Nb			Y/N	min T	
EB	6.00	0.00	Y	0	0	0.90	0	N	22.8	3
WB	7.00	0.00	Y	0	0	0.90	0	N	22.8	3
NB	6.00	0.00	Y	0	0	0.90	0	N	25.8	3
SB	6.00	0.00	Y	0	0	0.90	0	N	25.8	3

SIGNAL SETTINGS					CYCLE LENGTH - 60.0				
	PH-1	PH-2	PH-3	PH-4		PH-1	PH-2	PH-3	PH-4
EB LT	X				NB LT	X			
TH	X				TH	X			
RT	X				RT	X			
PD	X				PD	X			
WB LT	X				SB LT	X			
TH	X				TH	X			
RT	X				RT	X			
PD	X				PD	X			
GREEN	25.0	0.0	0.0	0.0	GREEN	25.0	0.0	0.0	0.0
YELLOW	5.0	0.0	0.0	0.0	YELLOW	5.0	0.0	0.0	0.0

LEVEL OF SERVICE							
	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.056	0.450	7.1	B	6.4	B
	TR	0.159	0.450	6.3	B		
WB	L	0.139	0.450	7.4	B	6.5	B
	T	0.074	0.450	6.1	B		
	R	0.007	0.900	0.2	A		
NB	LT	0.135	0.450	6.2	B	3.6	A
	R	0.133	0.900	0.2	A		
SB	LT	0.048	0.450	6.0	B	4.4	A
	R	0.012	0.900	0.2	A		

INTERSECTION: Delay - 5.1 (sec/veh) V/C - 0.212 LOS - B

APPENDIX D2

DOCUMENTATION OF AVAILABLE TRIP GENERATION AND DISTRIBUTION USED IN CUMULATIVE SCENARIO

APPENDIX D2

PROJECT TRAFFIC GENERATION AND DISTRIBUTION

General Data From Case Studies Project

Peak Traffic

- a. Potential Worst Case Traffic Conditions occur when a banquet dinner party arrives - Banquet Traffic was observed during the PM peak of the 20 years of the area.
- b. Survey of other Banquet Facilities in Current, Recently, and Formerly used indicated maximum of approximately 100 persons in 12,000 sq ft area. Banquet room approximately 100,000 sq ft. Total area, including Area Covered, 100,000 sq ft. Banquet room 100,000 sq ft.
- c. The size of the area, 100,000 sq ft, is not a factor in the design of the project. (See page 1-2 of 100,000 sq ft of project area.)
- d. Assume approximately 100 persons between the PM peak and 10 PM peak (1:00 PM to 10:00 PM).
- e. Vehicle occupancy for banquet members = 1.5 persons per vehicle. Banquet members for club members = 1.5 persons per vehicle.
- f. 10 persons enter the club and 10 persons exit the club during the PM peak hour.
- g. Assume 10 cars 10 minutes off of banquet are using the club.

PM Peak Hour Project with Project

$$100/1.5 = 66$$

$$100/1.5 = 66$$

$$110 \times 1.5 = 165 \text{ vehicles per hour PM peak}$$

$$165 \times 1.5 = 247.5$$

$$247.5 \times 1.5 = 371.25$$

Project Traffic Distribution. As given in the attached two figures

and will be used in the cumulative scenario. Traffic distribution report report, 100,000 sq ft, 1988.

APPENDIX D

PROJECT TRAFFIC GENERATION AND DISTRIBUTION

Oakland Hills Tennis Club Expansion Project

Project Traffic:

- o Potential Worst Case Traffic Conditions would occur with a banquet function early evening — banquet traffic would arrive during the latter part of the PM peak of the area.
- o Surveys of other banquet facilities in Oakland, Alameda and Berkeley have indicated capacities of approximately one person/12 to 18 sq. feet which they can accommodate comfortably. UBC, Table 33a, Assembly Area Concentrated Use, specifies one person/15 sq. feet.
- o The new banquet room, bar and existing lounge can accommodate 200 people. (See page 3-5 of EIR for breakdown of proposed project.)
- o Assume approximately 50% will arrive between the PM peak hour of the area (5:00-6:00 PM).
- o Vehicle occupancy for banquet members = 2.1 persons/car. Vehicle occupancy for club members = 1.4 persons/car.
- o 80 percent enter the club and 20 percent exit the club during the PM peak hour.
- o Assume 28 club members not at banquet are using the club.

Total PM Peak Hour Project with Banquet

$$\begin{array}{rcl} 200/2.1 & = & 95 \\ 28/1.4 & = & 20 \\ \hline 115 & \times 50\% & = 58 \text{ vehicles/PM PK HR} \end{array}$$

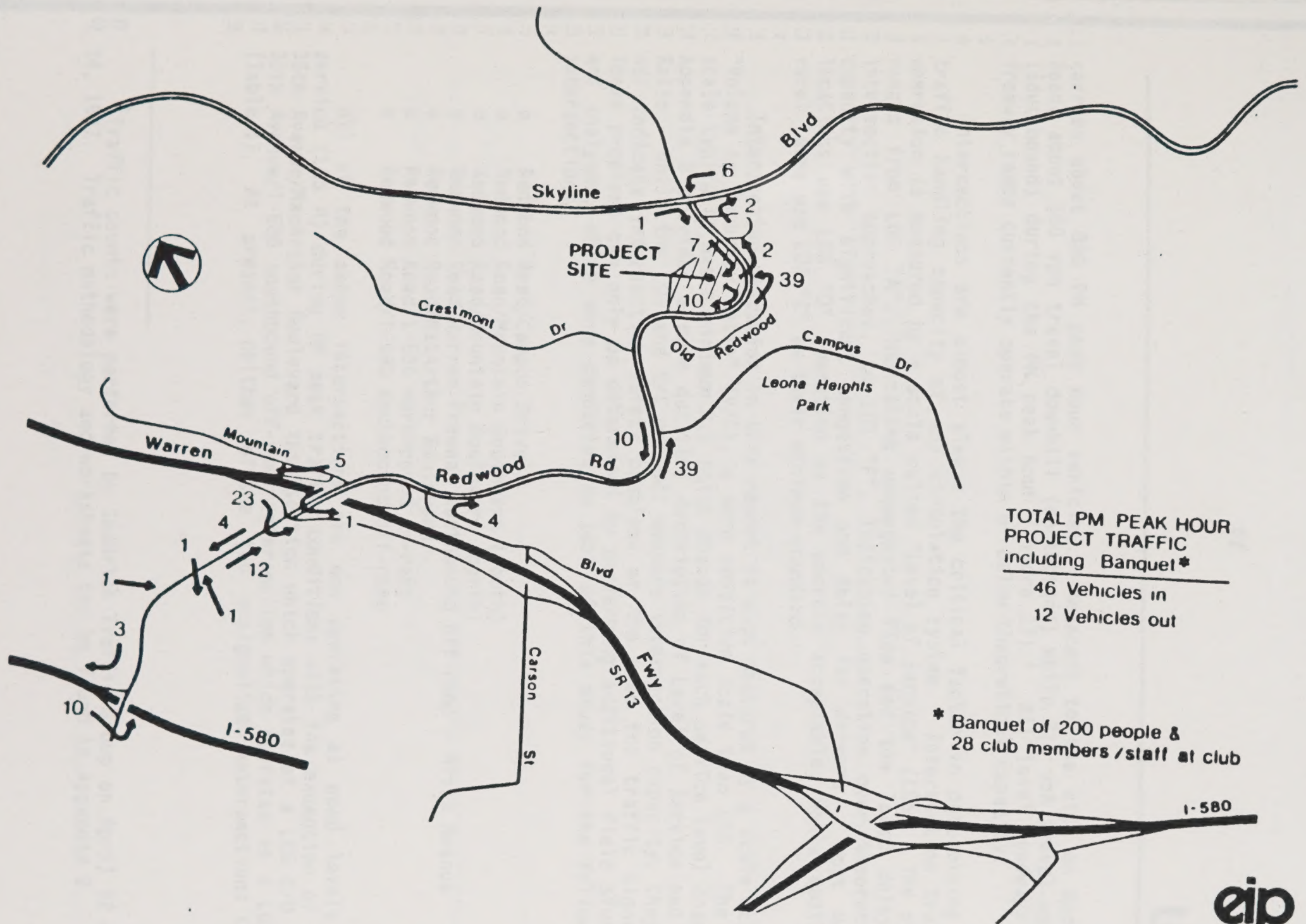
Enter 46 VEH/HR

Exit 12 VEH/HR

Project Traffic Distribution: As shown in the attached two figures.

Source: Oakland Hills Tennis Club Expansion Project Draft Environmental Impact Report, EIP Associates, 1988.

Source: EIP Associates, 1988.



carries about 880 PM peak hour vehicles. Adjacent to the site on Redwood Road, about 500 vph travel downhill (northbound) while 815 vph travel uphill (southbound) during the PM peak hour (Figure 17).¹ All local roadways and freeway ramps currently operate within or below theoretical capacity.

Intersections are almost always the critical factor in determining the traffic handling capacity of any circulation system. Intersection traffic operation is measured by a scale called "Level of Service" (LOS). The scale ranges from LOS "A", indicating uncongested flow and the least delay on intersection approaches, to LOS "F", indicating operation over theoretical capacity with significant congestion and delay for drivers. Most urban locations use LOS "D" operation as the poorest acceptable, while smaller, rural towns use LOS "C" as their minimum standard.

Intersection operation in this report is also measured by a scale called "Volume to Capacity Ratio" (V/C), a more sensitive scale than LOS. The V/C scale typically has a minimum 0.1 point change for each service level change. Appendix B provides a more detailed description of Level of Service and V/C Ratio. While the LOS and V/C methods measure intersection capacity, they do not indicate intersection safety problems or the need for traffic signals. These problems can only be determined by performing additional field studies and analyses, which were conducted as part of this study for the following intersections:

- o Redwood Road/Campus Drive
- o Redwood Road/Mountain Boulevard (south)
- o Redwood Road/Mountain Boulevard (north)
- o Redwood Road/Warren Freeway southbound off-ramp - Aliso Avenue
- o Redwood Road/MacArthur Boulevard
- o Redwood Road/I-580 northbound on-ramp
- o Redwood Road/I-580 southbound off-ramp

All of the above intersections are now operating at good levels of service (LOS A) during PM peak traffic conditions with the exception of the 35th Avenue/MacArthur Boulevard intersection which operates at a LOS C/D and 35th Avenue/I-580 southbound off-ramp intersection which operates at a LOS D (Table 1). At present, neither of the two unsignalized intersections that

¹Traffic counts were performed by Goodrich Traffic Group on April 22 and 24, 1987. Traffic methodology and worksheets can be found in Appendix B.

TABLE 7
ESTIMATED WEEKDAY PEAK HOUR VEHICLE TRIPS

		AM Peak Hour		PM Peak Hour	
Item	Unit	To Project	From Project	To Project	From Project
Trip Rates Single Family Detached Housing	1 Unit	0.20	0.56	0.63	0.29
Vehicle Trips Single Family Detached Housing	46 Units	9	26	29	17
Total by Peak Hour		35		46	
Total Daily Vehicle Trip Ends		463			

SOURCE: ITE, Trip Generation, Fourth Edition, 1987

Source: Oak Knoll Vista Estates Draft Environmental Impact Report, LSA Associates, Inc., 1990.

APPENDIX D3

CUMULATIVE LEVEL OF SERVICE CALCULATION SHEETS

1982 BUREAU OF TRANSPORTATION INVESTIGATION

Page 1

CONSTRUCTION OF CUMULATIVE LEVEL OF SERVICE CALCULATION SHEETS FOR THE YEAR 1982

IDENTIFYING INFORMATION

NAME OF THE ROAD/STREET PROJECT ROUTE PROJECT NO.

NAME OF THE WORK/PROJECT VEHICLE PROJECT NO.

AREA TYPE PROJECT NO.

NAME OF THE AREA PROJECT NO.

DATE OF THE AREA PROJECT NO.

TIME PERIOD ANALYSIS PROJECT NO.

OTHER INFORMATION

PROJECTED CUMULATIVE SERVICE VOLUME

TRAFFIC VOLUME

	1982	1983	1984	1985
LEFT	17	81	87	7
THRU	101	81	112	10
RIGHT	16	8	112	12
TOTAL	33	170	311	29

IF THE VOLUME WAS 16 IN 1982 THEN AN EQUAL TO RIGHT TURN VOLUME

1985 HCM: SIGNALIZED INTERSECTIONS

Page-1

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET.....SKYLINE BOULEVARD

NAME OF THE NORTH/SOUTH STREET.....REDWOOD ROAD

AREA TYPE.....OTHER

NAME OF THE ANALYST.....PAUL AWOSIKA

DATE OF THE ANALYSIS.....04/03/92

TIME PERIOD ANALYZED.....5.00 TO 6.00 P.M

OTHER INFORMATION:

PROJECTED CUMULATIVE TRAFFIC VOLUME

TRAFFIC VOLUMES

	EB	WB	NB	SB
	-----	-----	-----	-----
LEFT	37	81	67	3
THRU	151	81	116	38
RIGHT	66	8	147	15
RTOR	0	0	0	0

(RTOR volume must be less than or equal to RIGHT turn volumes.)

1985 HCM: SIGNALIZED INTERSECTIONS

SUMMARY REPORT

INTERSECTION..SKYLINE BOULEVARD/REDWOOD ROAD

AREA TYPE.....OTHER

ANALYST.....PAUL AWOSIKA

DATE.....04/03/92

TIME.....5.00 TO 6.00 P.M

COMMENT.....PROJECTED CUMULATIVE TRAFFIC VOLUME

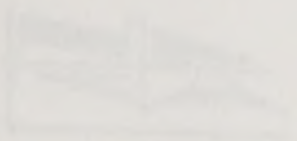
VOLUMES					:	GEOMETRY							
	EB	WB	NB	SB	:	EB		WB		NB		SB	
LT	37	81	67	3	:	L	12.0	L	12.0	LT	12.0	LT	12.0
TH	151	81	116	38	:	T	12.0	T	12.0	T	12.0	R	12.0
RT	66	8	147	15	:	TR	12.0	R	12.0	R	12.0		12.0
RR	0	0	0	0	:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0
					:		12.0		12.0		12.0		12.0

ADJUSTMENT FACTORS										
	GRADE	HV	ADJ	PKG	BUSES	PHF	PEDS	PED.	BUT.	ARR. TYPE
	(%)	(%)	Y/N	Nm	Nb			Y/N	min T	
EB	0.00	0.00	Y	0	0	0.90	0	N	22.8	3
WB	0.00	0.00	Y	0	0	0.90	0	N	22.8	3
NB	0.00	0.00	Y	0	0	0.90	0	N	25.8	3
SB	0.00	0.00	Y	0	0	0.90	0	N	25.8	3

SIGNAL SETTINGS								CYCLE LENGTH - 60.0			
		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X					TH	X			
	RT	X					RT	X			
	PD	X					PD	X			
WB	LT	X				SB	LT	X			
	TH	X					TH	X			
	RT	X					RT	X			
	PD	X					PD	X			
GREEN		25.0	0.0	0.0	0.0	GREEN		25.0	0.0	0.0	0.0
YELLOW		5.0	0.0	0.0	0.0	YELLOW		5.0	0.0	0.0	0.0

LEVEL OF SERVICE							
	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.062	0.450	7.1	B	6.5	B
	TR	0.172	0.450	6.4	B		
WB	L	0.151	0.450	7.4	B	6.5	B
	T	0.111	0.450	6.2	B		
	R	0.007	0.900	0.2	A		
NB	LT	0.139	0.450	6.3	B	3.6	A
	R	0.132	0.900	0.2	A		
SB	LT	0.056	0.450	6.0	B	4.5	A
	R	0.013	0.900	0.2	A		

INTERSECTION: Delay = 5.2 (sec/veh) V/C = 0.218 LOS = B



APPENDIX E

GEOTECHNICAL INVESTIGATION
(NORDMO ASSOCIATES, INC.)

Mr. Leon Taylor
777 Franklin Avenue
San Leandro, Ca. 94605

Dear Mr. Taylor:

Enclosed is a copy of the
Geotechnical Investigation
Report for the site located at
12345 Main Street
San Leandro, California

Introduction

In accordance with your request, we have completed a geotechnical investigation at the site for the proposed 12-foot wide driveway. The work was performed as outlined in our January 15, 1981 proposal. We received a signed copy of this proposal letter with \$1,000.00 retainer fee on February 5, 1981.

The subject property is located at the western end of Highway Road, a short distance north of the intersection of Highway Road and Skyline Highway. It is situated in an undeveloped portion of Alameda County. The general site location is shown on attached map, MAP, PLAT 1, PLAT 2 shows the proposed driveway layout and planned house location.

The property is an irregularly shaped parcel that is currently undeveloped. The site is located on a slight slope to the west towards Highway Road. The site is approximately 12 feet wide and 12 feet deep. The site is bounded by the Highway Road to the west and the Skyline Highway to the east.



NORDMO ASSOCIATES, INC.

Geotechnical Consultants

March 4, 1991
Project 0738-08A

Mr. Leon Mayer
753 Peralta Avenue
San Leandro, CA 94577

Dear Mr. Mayer:

Preliminary Report
Geotechnical Investigation
Proposed 23-Lot Subdivision
Redwood Road
Oakland, California

INTRODUCTION

In accordance with your request, we have completed a geotechnical investigation at the site for the proposed 23-lot subdivision. The work was performed as outlined in our January 16, 1991, proposal. We received a signed copy of this proposal letter with \$1,400.00 retainer fee on February 4, 1991.

The subject property is located on the eastern side of Redwood Road, a short distance north of the intersection of Redwood Road and Skyline Boulevard in an unincorporated portion of Alameda County. The general site location is shown on attached VICINITY MAP, PLATE 1. PLATE 2 shows the proposed subdivision layout and planned house locations.

The property is an irregularly shaped parcel that is currently undeveloped. The hillside property in general slopes down to the west towards Redwood Road with varying gradients. The approximately six-acre plus parcel is delineated by one major

ravine and two other minor ones. All three ravines run in the east-west direction.

PREVIOUS WORK

We performed a geotechnical investigation and submitted a report dated June 20, 1988. This report was prepared for the lower northwestern portion of the subdivision. At that time, a four lot subdivision was planned. A copy of the exploratory trench logs for the aforementioned report is attached on PLATE 3A.

PROJECT DESCRIPTION

A review of project plans prepared by MSG Engineering & Surveying indicates that the proposed development will involve the construction of 23 single family residences at the site. An access road will be constructed to the subdivision to and from Redwood Road. Driveways to the residences will be constructed from the planned access road. Storm drains requiring deep trench backfilling are planned as part of the construction of the subdivision. Details regarding the residential structures, however, were not available during the preparation of this report.

SCOPE OF SERVICES

The purpose of our investigation is to address, from a geotechnical engineering viewpoint, the overall stability of the construction area, the risk of debris flow from the steeper hillside area uphill of the construction area; evaluate site surface and subsurface conditions and provide geotechnical design

parameters for the proposed development. More specifically, our scope of work was as follows:

1. Review available published seismic and geologic maps pertaining to the site and the immediate area. We also reviewed our work previously done for a portion of the site.
2. Excavate six exploratory trenches at the locations shown on the SITE PLAN, PLATE 2. The trenches were logged by a geologist on our staff who obtained representative samples for laboratory testing.
3. Perform pertinent laboratory testing on samples obtained during the field exploratory work.
4. Based on Items 1, 2 and 3, evaluate the stability of the existing slopes at the site; develop geotechnical recommendations for site preparation, grading and earthwork; provide geotechnical design parameters for building foundations, retaining walls, concrete slabs-on-grade, utility trench backfilling and site drainage.
5. Design of pavement section for the proposed road and driveways.
6. Summarize our findings, conclusions and recommendations in this written report.

FIELD AND LABORATORY INVESTIGATIONS

FIELD

Our field exploratory work was completed on February 26, 1991, and consisted of excavating six exploratory trenches to a maximum depth of 10 feet below the existing ground surface. The trenches were excavated with a track-mounted backhoe with an 18-inch bucket. The trenches were loosely backfilled after completion of our exploratory inspection and logging. The trench logs are presented as PLATE 3.

LABORATORY

The nature of the soils and bedrock material encountered made it difficult to obtain relatively "undisturbed samples".

Water-content determinations were performed on numerous samples and their results are shown on the trench logs.

A shrink/swell test was performed to determine the swell properties of the subsurface material. The results are presented on PLATE 4. The results show that the soils are of low expansivity.

SITE CONDITIONS

SURFACE

The property is located on a western facing hillside and is generally characterized by steep slopes (1 1/2H:1V) and deep,

steep-sided erosion gullies and a ravine in the northern portion of the property. Small portions of the northwestern and southwestern areas of the property are moderately sloped (approximately 100 square feet in area).

The ravines of the property are thickly vegetated with chaparral brush, scrub oak, and oak trees. The lower 150 feet of the western area of the property has a thick growth of eucalyptus trees. Elsewhere, the steep slopes are covered with various native grasses.

Approximately five-foot-high near vertical cuts exist along Redwood Road and at the existing sanitary sewer easement on the eastern portion of the property.

SUBSURFACE

The exploratory trenches revealed fill, topsoil, alluvium, and colluvium deposits (soil cover) over bedrock of the Joaquin Miller Formation.

The trenches revealed a variation in the soil cover. Soil cover thickness ranged from about a foot of topsoil on the hillsides to approximately 10 feet of topsoil and subsoils (alluvium and colluvium) at the base of the ravine on the northwestern portion of the property. The alluvial materials encountered in Trenches ET-1 through ET-4 (our previous investigation) and T-6 were clayey silt and clayey sand with weathered rock fragments. This material was found to be very stiff/medium dense.

A thin layer of colluvial material was exposed in Trenches T-2, T-3 and T-5 on the western portion of the property. The colluvial material was up to two feet in thickness and composed of sandy, clayey silt with generally angular bedrock pieces.

Underlying the topsoil and subsoils are friable sandstone, shale and minor claystone deposits. The sandstone is thinly to moderately bedded (up to six inches in thickness). The minor layers of claystone encountered were up to four inches in thickness and hard. Generally, the bedrock is moderately weathered.

Also, bedrock outcrops of friable sandstone and shale were exposed in the area cut for the existing sanitary sewer easement on the eastern portion of the property.

Although ground water was not encountered in any of the exploratory trenches, we encountered very moist materials in trenches closest to the largest and northernmost ravine (T-1 and T-2). In addition, the bedrock material at this location was easier to excavate.

GEOLOGY

STRUCTURE

The findings in our trenches correspond with the regional geologic mapping. The area is shown to be underlain by deposits of the Joaquin Miller Formation, according to the Areal and Engineering Geology Map of the Oakland East Quadrangle (Radbruch, 1969). The site location in reference to the aforementioned geologic map with bedrock descriptions is shown on PLATE 5. The Joaquin Miller Formation is described as fine to medium-grained

sandstone, shale and minor conglomerate, with good to fair slope stability.

Regional dips shown on the geologic map face into the hillside which in general give favorable slope conditions. Dip angles measured during our field exploratory work were found to dip to the east and into the hillside except at the ravine banks. Dips and strikes where measured during our field exploratory work, are shown on the SITE PLAN, PLATE 2. The general thickness of topsoil and subsoils and apparent dip directions are shown on Cross Sections A-A and B-B, PLATE 6.

LANDSLIDE

No landslides were found on the property during our field exploratory work. No scarps, slumps nor other landslide morphology was found at the site; however, there is the potential for sloughing of material during seismic activity, especially when the materials are wet.

EROSION

Erosion activities were present at the site, and especially in the ravines. Site grading should incorporate measures to reduce future erosion.

SEISMICITY

The site lies within the seismically active San Francisco Bay Region, but outside of any special study zones defined by the

Alquist-Priolo Special Studies Zone Act of 1972. The site's relative location to the special studies zone is shown on PLATE 7. The San Andreas Fault, which extends over 750 miles from the Gulf of California to Cape Mendocino, is the predominant fault within the region and was the source for the October 17, 1989, Loma Prieta earthquake. The site is located 20 miles to the northeast of the San Andreas Fault. Within the Bay Area, however, the San Andreas is but one of several major faults that lie within the 50-mile wide complex plate-boundary zone. The other major potential source of future significant ground motions in the site area is the Hayward Fault, which is located approximately one mile to the southwest of the site. The inactive Chabot Fault lies just southwest of the site. During the historical period (approximately the past 160 years), these faults have produced 10 moderate to large earthquakes (Magnitude $M > 6$) within the Bay Area (Toppozada and others, 1979; Real and others, 1978).

Two faults dominate future-earthquake considerations for the site; the Hayward Fault, and the San Andreas Fault. The Hayward Fault has been the source of two $M_{6.8}$ earthquakes during the historical period, in 1836 and 1868 (Toppozada and Parke, 1983). The latter event ruptured a segment of the fault south of Oakland to near Mills College, within about two miles southwest of the site (Lawson, 1908) and produced modified Mercalli damage intensity VIII in the general vicinity (Toppozada and Parke, 1982). The Working Group on California Earthquake Probabilities (1990) has estimated a 28 percent probability for an M_7 earthquake occurrence on the Hayward Fault during the 30-year period between 1990 and 2020. The San Andreas Fault was the source of the largest Bay Area event during the historical period, the M_8 1906 San Francisco earthquake that ruptured from San Juan Bautista to Shelter Cove. In addition to the M_7 Loma Prieta earthquake in 1989, an M_7 earthquake in 1838 and $M_{6.3}$ earthquake in 1865 have been attributed to the San Andreas

Fault. The Working Group on California Earthquake Probabilities (1990) has estimated a less than five percent probability for an M8 earthquake occurrence on the North Coast segment of the San Andreas, but a 23 percent probability for an M7 earthquake occurrence on the San Francisco Peninsula segment of the fault during the 30-year period between 1990 and 2020. Given the historical record and the estimated likelihood of future earthquakes in the Bay Area, future occurrence of a strong ground shaking at the site may be expected.

CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

We find the site developable from a geotechnical engineering viewpoint provided some ground modifications and proper grading procedures are followed. The following recommendations are given with the proviso that we are given the opportunity to review project grading and foundation plans and details and to observe the geotechnical aspects of construction. The following is a summary of our recommendations:

- Cut slopes in dense bedrock should be no steeper than 1 1/2H to 1V. Cut slopes in stiff to hard subsoil should be no steeper than 2H to 1V.
- All grading and earthwork should be performed as recommended in a following section titled "SITE PREPARATION AND EARTHWORK".
- The proposed structures should be supported on properly designed cast-in-place reinforced concrete pier-and-grade beam

foundation. General foundation recommendations and design criteria are given in a section below. Detailed foundation design parameters for individual lots will be dependent on the individual lot location and building pad configuration and elevation (cut, fill or sloping pad).

- Proper and adequate surface and subsurface drainage provisions should be an integral part of the proposed development.
- We should be given the opportunity to review the design plans and to test and observe the geotechnically related work. This work will be performed for an additional fee.

SITE PREPARATION, GRADING AND EARTHWORK

Clearing and Stripping

Debris and other unsuitable materials should be removed from the construction areas. Trees and shrubs that will not be part of the proposed development should be removed and their primary root systems grubbed. Materials arising from these operations should be wasted off-site. The resulting depressions and voids should be cleaned and brought to grade with structural fill.

Earthwork and pavement areas should be stripped of vegetation and organic topsoil. Strippings should be wasted off-site or, if suitable, stockpiled for subsequent use in landscaping. If stockpiled, strippings should be placed such that they will not create debris flows or erosion hazards.

Water-Conditioning and Compaction Criteria

Soil exposed after removing the fill and loose materials, except where bedrock is exposed, should be scarified, water-conditioned (or allowed to dry) to approximately the optimum water content and then compacted to at least 90 percent of the maximum dry density as determined by ASTM Test Method D1557-78. Structural fill may then be placed to the design grades.

Keying, Benching and Subdrains

Fill placed in slopes steeper than 5 to 1 should be keyed and benched into bedrock. Subdrains should be installed in keyways. Such drains may also be required in benches as determined by the Geotechnical Engineer.

Structural Fill

Structural fill should consist of low-expansive, inorganic on-site soil or approved imported material. Structural fill should have a maximum irreducible particle size of four inches with a plasticity index of 12 percent or less. Structural fill should be placed in maximum eight-inch layers (before compaction), water-conditioned and compacted to at least 90 percent relative compaction.

Trench Backfill

Trenches five feet or deeper should be shored. Reference is made to recent CAL OSHA requirements for trench work. Trenches

should be backfilled with soil placed in lifts of approximately eight inches in uncompacted thickness if light tampers are used. However, lifts up to three feet in uncompacted thickness may be placed if "stomper" type compaction equipment is used. Clean sand or pea gravel should be used as pipe bedding material. Backfill in utility trenches should be compacted and water-conditioned to the same specifications as outlined above.

FOUNDATION DESIGN CRITERIA

We recommend that each of the proposed structures be supported by cast-in-place reinforced concrete pier-and-grade-beam foundation system. The piers should be designed to carry the load in skin friction between the pier shaft and the surrounding soil. In general, we recommend a maximum allowable skin friction of 400 pounds per square foot (psf) in the bedrock for the design of the piers. In addition, the piers should be embedded a minimum of six feet into the dense bedrock. No friction should be counted on in the fill nor in the subsoil. Our minimum recommended pier diameter is 12 inches.

We recommend that a lateral soil pressure (creep load) equivalent to that resulting from a fluid with a unit weight of 120 pounds per cubic foot (pcf) be assumed on the pier shaft throughout the depth of the subsoil where the finished surface gradient is steeper than 4 horizontal to 1 vertical. This will be in addition to lateral loads due to wind or seismic loading.

The piers should be tied together with reinforced concrete grade beams that should be designed and constructed to safely transfer all loads to the supporting piers.

Our maximum allowable passive soil pressure is 450 pcf against the projected pier shaft in the bedrock.

RETAINING WALL DESIGN

Soil retaining walls should be designed to resist a lateral soil pressure (active) equivalent to that resulting from the following unit weights:

<u>Slope Uphill of Wall</u> <u>(Degrees)</u>	<u>Unit Fluid Weight</u> <u>(pcf)</u>
0	40
16	50
26	60

The recommended active pressures given above assume that water pressure will not build up behind the walls. Thus, a drainage system will be required behind all retaining walls.

Retaining walls that will be part of the proposed structures should be supported on piers that should be designed to resist sliding and vertical loading.

DRAINAGE

Surface

We recommend that surface drainage gradients be constructed to prevent ponding and to promote drainage of surface water away from the building foundations, slabs and pavement and towards suitable collection and discharge facilities. We recommend that unpaved finished surfaces, within five feet of the building perimeters, be

designed with gradients of at least five percent. Slope surface should be protected against erosion by proper landscaping. A yard drainage system should also be planned and constructed for each lot.

We recommend that eave gutters and downspouts be installed to collect roof water runoff. We recommend that outlet pipes from the downspouts be directed to appropriate outlet locations.

Energy dissipators should be placed at the storm drain outfalls to minimize erosion and scouring. Riprap should be provided at all intake structures.

Subsurface

A shallow subdrain should be provided along the uphill perimeter grade beams at each structure. The subdrain should consist of a rigid four-inch-diameter perforated plastic pipe surrounded by Class 2 permeable material conforming to Section 68 of CalTrans, Standard Specifications, latest edition. Alternatively, the perforated pipe may be surrounded by clean gravel provided that the gravel is separated from the surrounding soil by a filter fabric.

The subdrain should be at least 12 inches wide, 18 inches deep along the grade beams and equal to $\frac{3}{4}$ of the height of the retaining walls. The invert of the subdrain along the grade beams is to be below the bottom of the grade beam. At the retaining walls, the invert should be at the top of the footing. Backfill over the subdrain should consist of compacted low-permeable native soil. The perforated pipe should be placed with holes down at the bottom of the permeable material and discharged by gravity to the

main outlet drain system. Typical details of the subdrain are shown on PLATE 8.

SLABS-ON-GRADE

Subgrade for slab-on-grade areas, if any, should be prepared as described under "SITE PREPARATION AND EARTHWORK". Subgrades for slabs-on-grade, should be properly water-conditioned and covered with a five-inch-thick layer of aggregate base material (at driveway and other outside slabs) that should be compacted to at least 92 percent relative compaction.

At living area slabs, clean gravel should be placed over the prepared subgrade. The gravel should be covered with a vapor barrier and a one-inch-thick cover of moist sand placed over the vapor barrier.

ASPHALTIC CONCRETE PAVEMENT

The subgrade in the proposed road is to be compacted to a minimum of 90 percent relative compaction as determined by ASTM Test D1557-78.

The following minimum pavement sections are recommended for the Traffic Indices indicated:

<u>T.I.</u>	<u>Thickness in Inches</u>	
	<u>Asphalt Concrete</u>	<u>Aggregate Base</u>
4.0	2 1/2	7
4.5	2 1/2	9
5.0	2 1/2	11
5.5	3	12

The aggregate base should conform to CalTrans Class 2 (Section 26) material and should be compacted to at least 95 percent relative compaction.

PLAN REVIEW AND CONSTRUCTION OBSERVATION

We should be given the opportunity to review the grading, drainage and foundation plans for the proposed development before they are submitted to the official reviewing agency to verify that they properly incorporate the recommendations and design concepts outlined in this report.

In addition, we should observe and test geotechnically related items of construction to help optimize compliance with project specifications. Presence of a geotechnical consultant at such times will also make possible appropriate and timely changes in the event that subsurface conditions differ from those anticipated (see LIMITATIONS below). Such deviations sometimes require additional expenditure to obtain a properly constructed project. Some contingency funding is recommended to accommodate such extra costs.

LIMITATIONS

The exploratory trenches and boring yield information strictly at the locations excavated. The conclusions and recommendations contained in this report are based largely on this information. Deviations in subsurface conditions from those anticipated may be encountered during construction or at other times. Should this occur, it will become necessary to reevaluate the information in this report.

Changes in geotechnical conditions at the site can occur naturally over time or through acts of man. Such changes could render the conclusions and recommendations contained herein invalid unless verified or modified in writing by us. In addition, should there be changes in the design or nature of the proposed development from what we understand it to be, the conclusions and recommendations presented in this report will likewise be considered invalid.

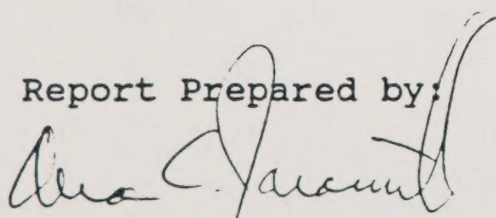
This report is the property of the owner(s) and is not to be used by others without his/their consent. It is issued with the understanding that the owner(s) or his/their representative will make the information and recommendations contained herein available to design professionals and contractors, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

Services for this project were performed in accordance with currently accepted standards of the geotechnical engineering profession. This assurance is offered in lieu of any warranty, either express or implied.

Respectfully submitted,

NORDMO ASSOCIATES, INC.

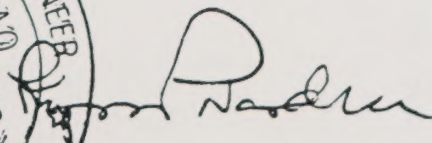
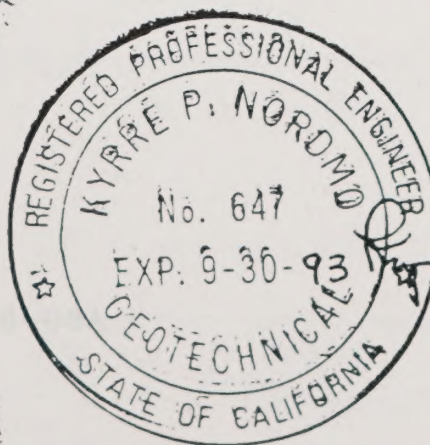
Report Prepared by:



Ana C. Jaramillo,
Project Geologist

KPN/ACJ/pj
Attachments
Copies: Addressee (4)

Reviewed by:



REFERENCES

Greensfelder, Roger, 1974, Maximum Credible Rock Accelerations from Earthquakes in California: California Division of Mines and Geology. Scale: 1:2,500,000.

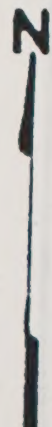
Nordmo Associates, Inc., June 20, 1988, Report, Soil and Geologic Investigations, Proposed 4-Lot Subdivision, Oakland, California: Prepared for Mr. Leon Mayer, 11 p., 4 plates, Project 0738-08.

Radbruch, D.H., 1969, Areal and Engineering Geology of the Oakland East Quadrangle, California: U. S. Geological Survey Map GQ 769. Scale: 1:24,000.

State of California, 1982, Special Studies Zones, Oakland East Quadrangle: California Division of Mines and Geology. Scale: 1:24,000.

Project 0738-08A

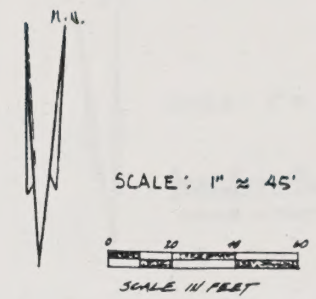
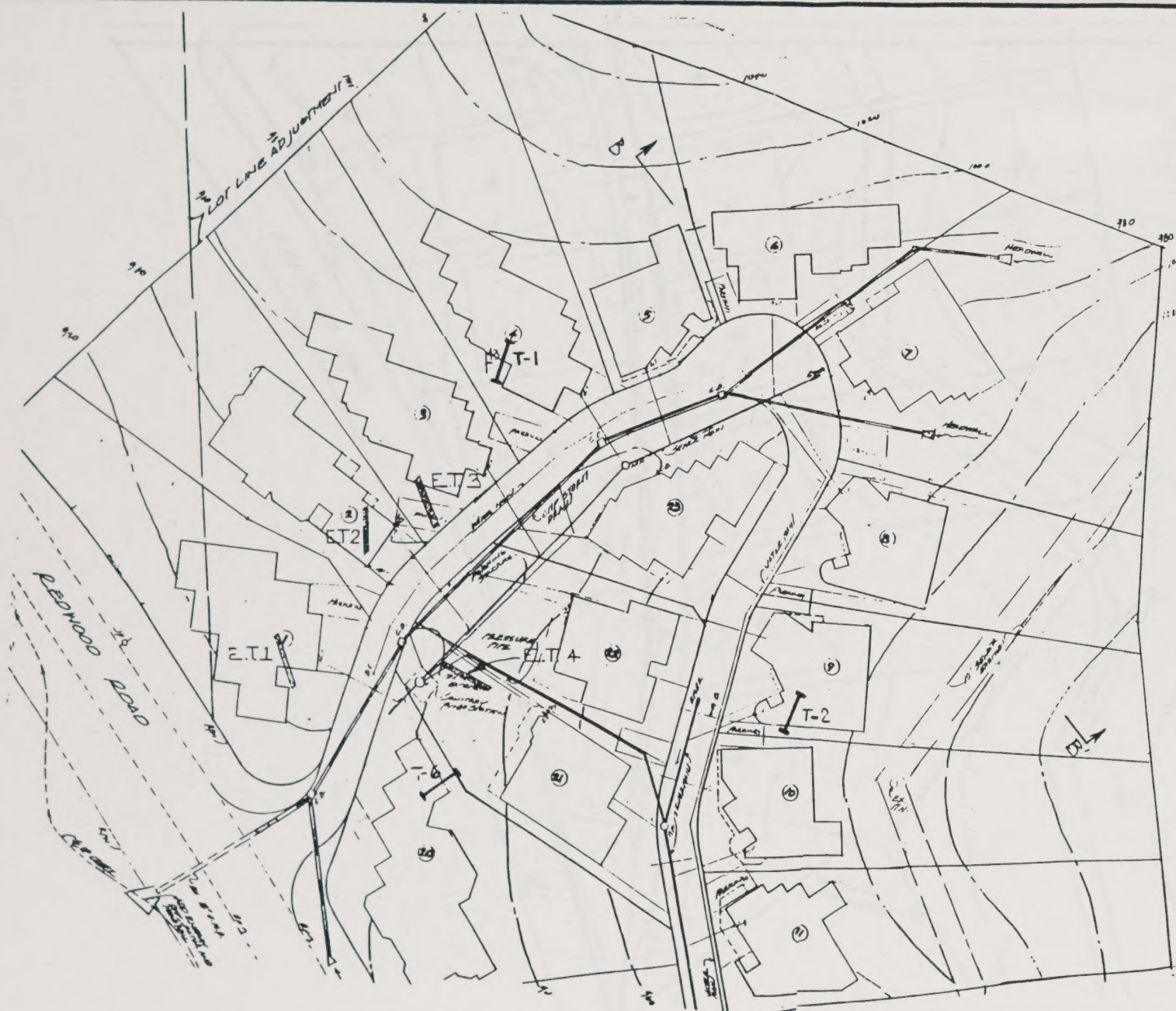
NORDMO ASSOCIATES, INC.



BASE MAP: THOMAS BROS. GUIDE, ALAMEDA CO., P. 12, 1-3.

	NORDMO ASSOCIATES, INC.	Geotechnical Consultants	DATE: 02/91
PROJECT 0738-08A	VICINITY MAP		SHEET 1 OF 1
	23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA		PLATE 1

E-21



KEY:
T-1 / NUMBER & APPROX. LOCATION OF EXPLORATORY TRENCH
E.T.1 / NO. & APPROX. LOCATION OF EXPLORATORY TRENCH, FROM REPORT OF 05/88.

BASE MAP: MSD ENGINEERING, SURVEYING, JUNE '90.

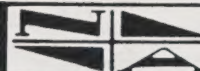
	NORDMO ASSOCIATES, INC.		Geotechnical Consultants	DATE: 02/91
	PROJECT 0738-08A		SITE PLAN	SHEET 1 OF 2
	23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA			PLATE 2

0 20 40 60
SCALE IN FEET

T-3 / NUMBER & APPROX.
LOCATION OF EXP.
TRENCH.

3-1 SHRINK/SWELL SAMPLE LOCATION

BASE MAP: MSD ENGINEERING, SURVEYING,
JUNE '90.



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 2 OF 2

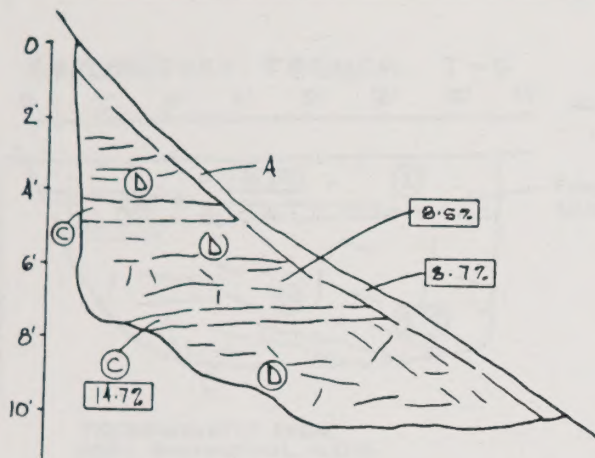
SITE PLAN

PROJECT 0738-08A

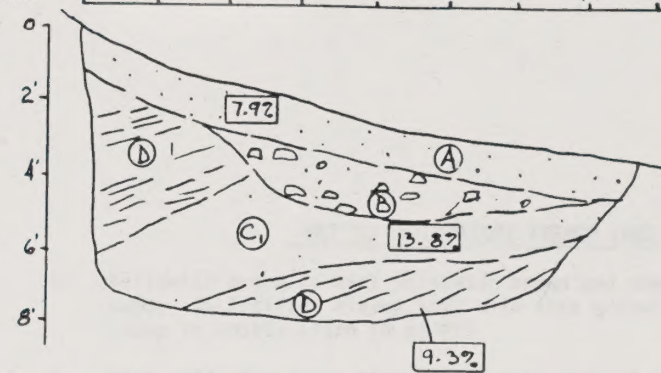
23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 2

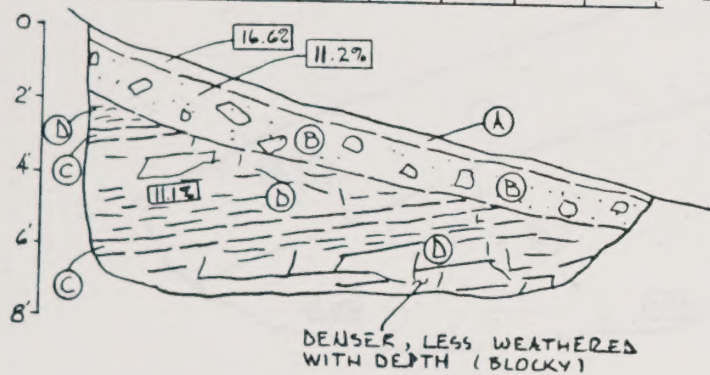
EXPLORATORY TRENCH T-1
NORTH 0 2' 4' 6' 8' 10' 12' 14' 16' SOUTH



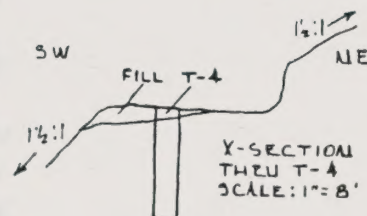
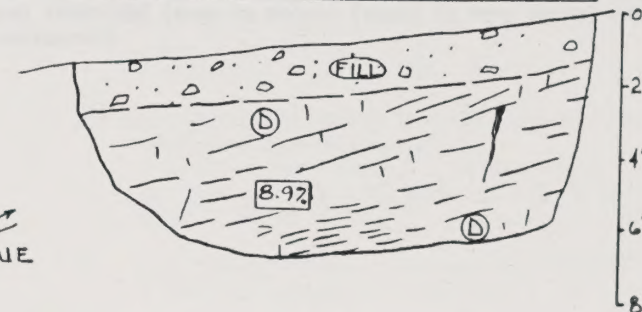
EXPLORATORY TRENCH T-3
NORTH 0 2' 4' 6' 8' 10' 12' 14' 16' SOUTH



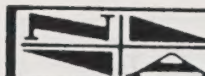
EXPLORATORY TRENCH T-2
NORTH 0 2' 4' 6' 8' 10' 12' 14' 16' SOUTH



EXPLORATORY TRENCH T-4
NORTHWEST 14' 12' 10' 8' 6' 4' 2' 0' SOUTHEAST



SCALE IS 1" = 4' UNLESS OTHERWISE NOTED.



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 1 OF 2

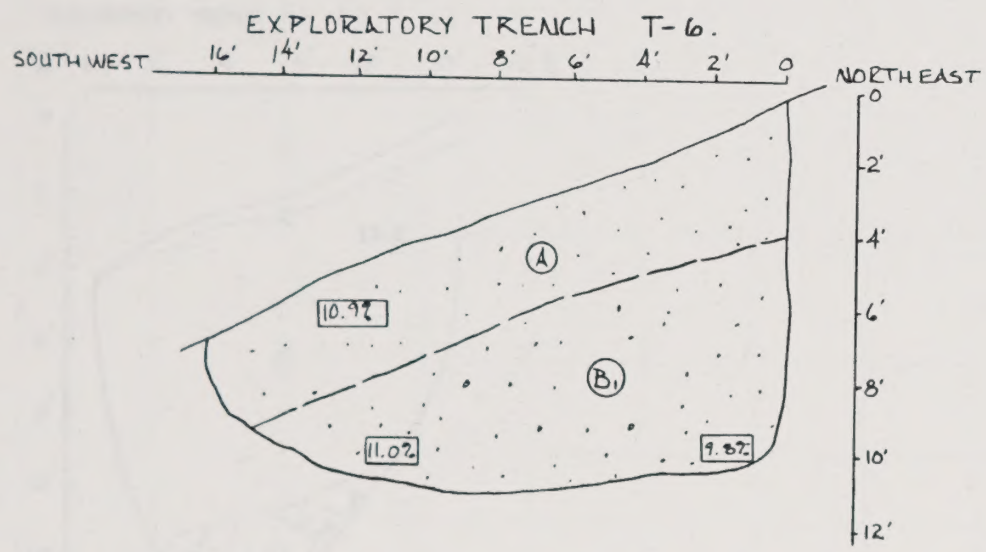
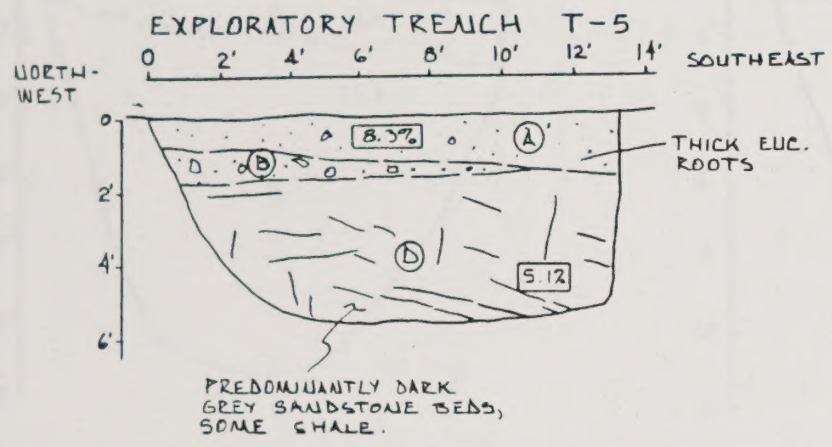
PROJECT 0738-08A

EXPLORATORY TRENCH LOGS

23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 3

E-24

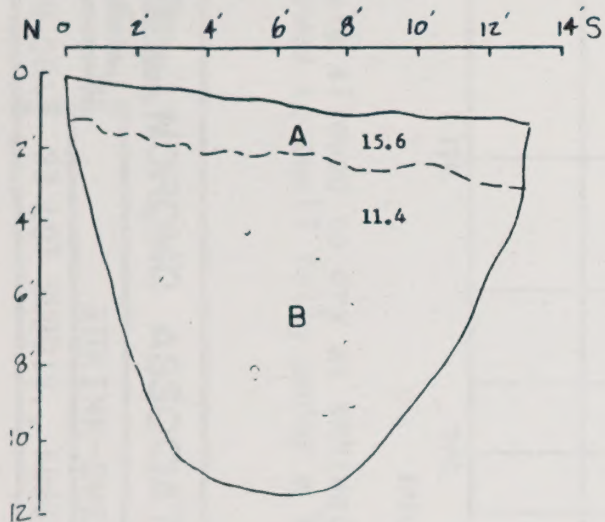


SCALE IS 1"=4' AS SHOWN.

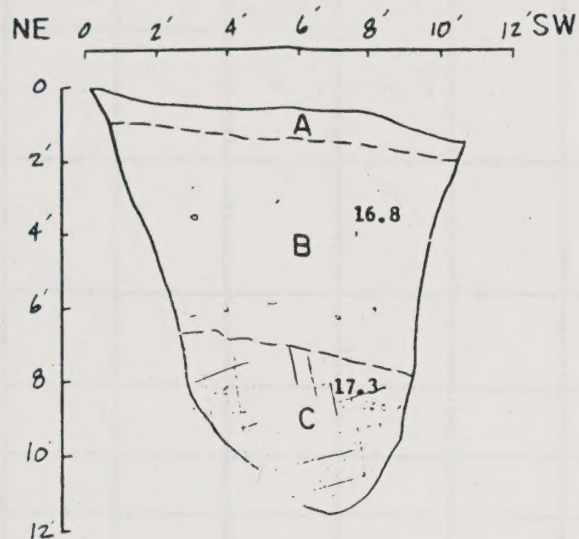
KEY TO EXPLORATORY TRENCH LOGS

- A Yellowish brown to dark yellowish brown and some grey clayey, sandy SILT/silty, clayey SAND with fine gravel, rootlets (damp to moist) (firm to stiff)
- B Dark yellowish brown clayey SAND with bedrock pieces (moist) (medium dense) (colluvium)
- B₁ Reddish brown silty, clayey SAND with fine gravel (damp to moist) (medium dense) (grades grey with depth)
- C Yellowish brown to orange brown silty MUDSTONE (moist) (very stiff to hard)
- C₁ Yellowish brown to orange brown, some grey silty CLAY/CLAYSTONE (damp) (stiff)
- D Yellowish brown, reddish brown, and grey fresh surfaces SHALE and SANDSTONE (damp to moist) (dense to very dense) (moderately weathered)

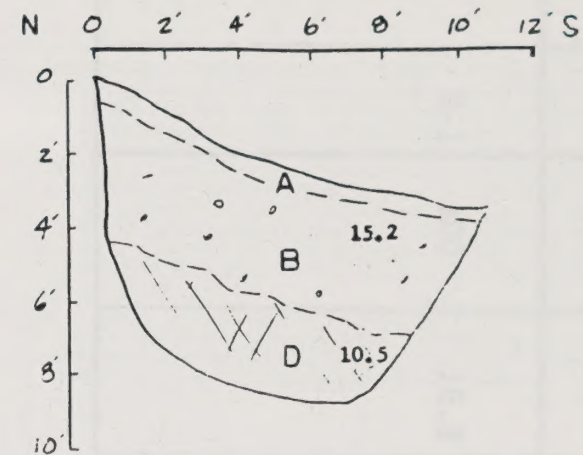
EXPLORATORY TRENCH #1 (E.T. 1)



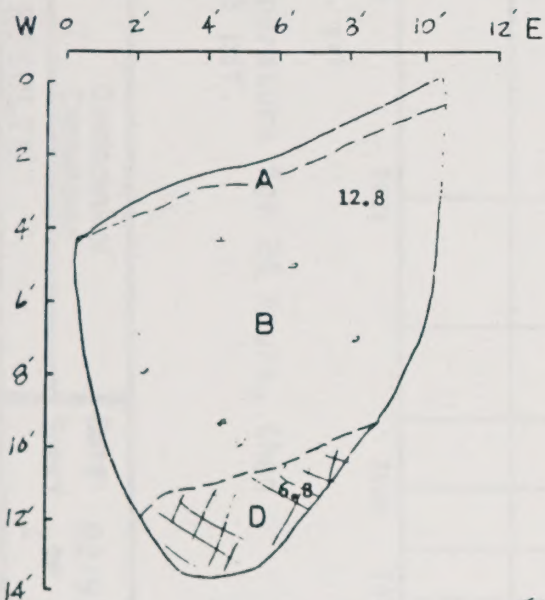
EXPLORATORY TRENCH #2 (E.T. 2)



EXPLORATORY TRENCH #3 (E.T. 3)



EXPLORATORY TRENCH #4 (E.T. 4)



SCALES: 1 INCH = 4 FEET AS SHOWN

EXPLANATION:

- A: Dark yellowish-brown clayey SILT topsoil
(Moist) (Stiff)
Gradational lower contact, 1 ft. to 2 ft. in thickness
- B: Dark yellowish-brown to reddish-brown clayey SILT with
weathered rock fragments
(Moist to very moist) (Very stiff)
Gradational upper and lower contacts, thickness ranges
from 4 ft. to 10 ft.
- C: Very dusky red silty fine-grained SANDSTONE
(Moist) (Dense) (Fractured)
- D: Light olive-brown to medium-dark gray MUDSTONE
(Damp) (Hard) (Fractured)

11.7: Moisture content in percent



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

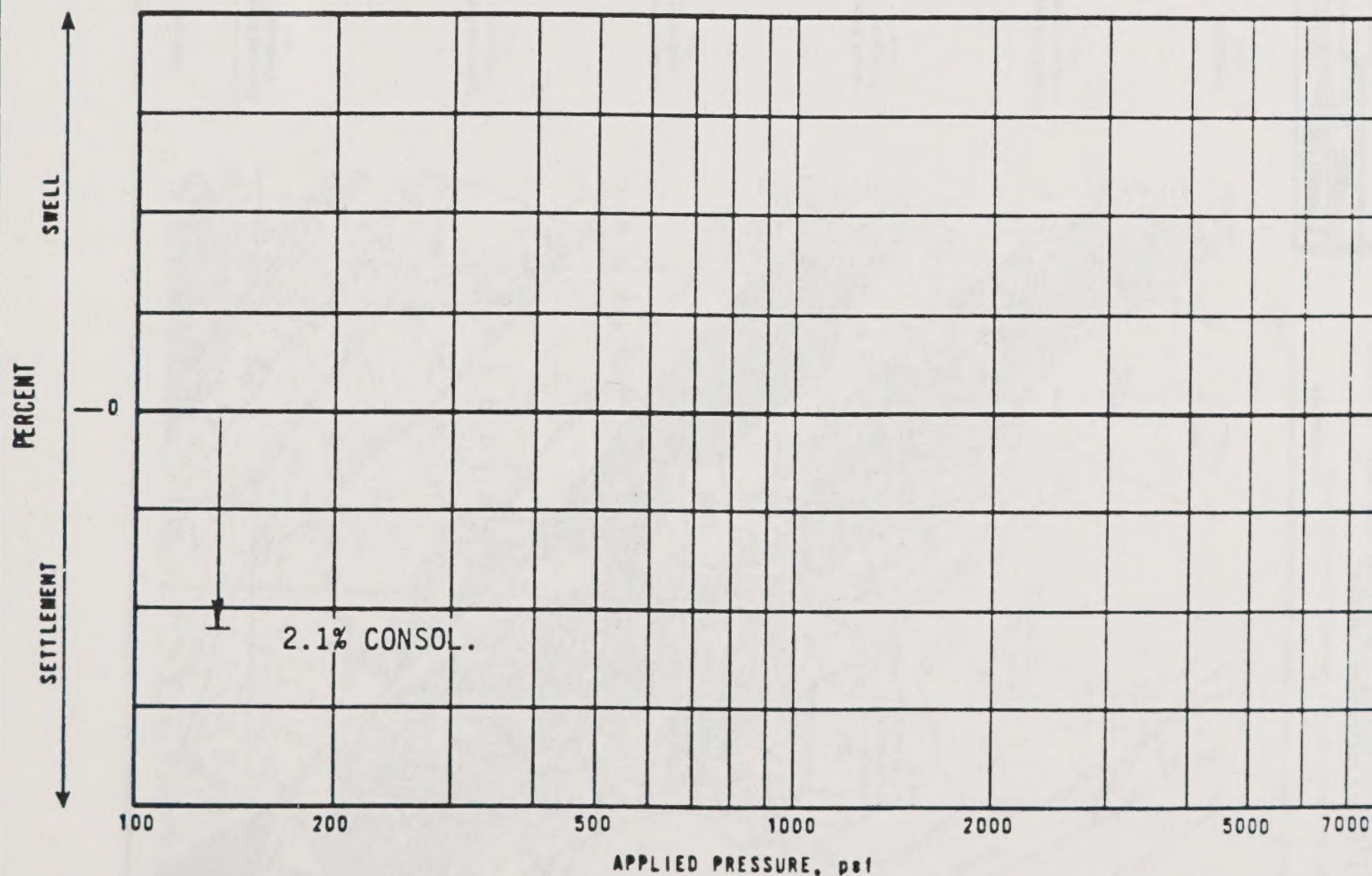
DATE: 05/88
SHEET 1 OF 1

PROJECT 0738-08

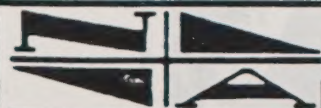
SOIL INVEST., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 3A

HOLE NO.	DEPTH (ft)	SPEC NO.	INITIAL SPECIMEN DATA				FINAL SPECIMEN DATA			
			DRY DENSITY (pcf)	WATER CONTENT (%)	VOID RATIO (e)	DEGREE OF SATURATION (%)	DRY DENSITY (pcf)	WATER CONTENT (%)	VOID RATIO (e)	DEGREE OF SATURATION (%)
B-1	1/2	R-1	100	16.9	--	57	92	29.8	--	100



NOTES: Sample allowed to dry at ambient room temperature for 24 hours, then allowed to swell fully under a load of 125 psf.



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 1 OF 1

SHRINK-SWELL TEST RESULTS

PROJECT 0738-08A

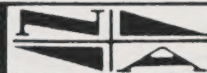
23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 4



BASE MAP: RADBRUGH, D. J., U.S. GEOLOGICAL SURVEY, AERIAL & ENGINEERING GEO OF THE OAKLAND EAST QUAD., CA, 1967.

Map unit ¹	General lithologic description
Redwood Canyon Formation ^a (Kr)	Sandstone, fine- to medium-grained, yellowish-brown, in beds 6 inches to 12 feet thick; contains round dark concretions as much as 2 feet in diameter ("cannon balls"). Interbedded with clayey siltstone and very fine grained sandstone, medium-gray to dusky-yellow, in beds less than 1 inch to 1 foot thick. Rocks contain abundant flakes of organic material, display crenulated bedding. Some dark shale beds. Distinctive light-olive-gray and grayish-red Late Cretaceous foraminiferal shale at top of unit described separately by Case (1968), has been included with Redwood Canyon Formation in this report. Rocks deformed, faulted, fractured. Thickness unknown, probably between 1,700 to 2,000 feet; grades into underlying Shephard Creek Formation
Shephard Creek Formation ^a (Ks)	Shale, massive, olive-gray; also interbedded shale and fine sandstone. Massive shale in beds 20 feet or more in thickness. Faulted and fractured. No fossils found. Thickness unknown, may be as much as 1,500 feet. Grades into underlying Oakland Conglomerate
Oakland Conglomerate (Ko)	Conglomerate, with sandstone matrix, and sandstone, coarse- to medium-grained; minor amounts of shale. Pebbles and cobbles in conglomerate commonly 1-2 inches in diameter. Many clasts fractured. In places, sandstone contains shale fragments. Yellowish-brown, weathered; fresh rock not seen on surface. Sandstone and conglomerate in lenticular beds mostly 3-10 feet thick. Sheared and fractured. Appears nearly barren of fossils. Maximum thickness about 1,000 feet; gradational with underlying Joaquin Miller Formation
Joaquin Miller Formation ^a (Kjm)	Sandstone, fine- to medium-grained; shale; minor conglomerate. In places contains fragments of organic material. Yellowish-brown in outcrop, medium- to dark-gray on fresh surfaces. Massive to thin-bedded. Beds one-quarter of an inch to 10 feet thick. Sandstone beds increase in frequency and thickness toward top of unit. Shale near base distinguished by massive character from fissile Knoxville shale, from which it is separated by East Chabot fault. In places contorted, sheared, fractured; most joints iron-stained. Fossils rare. A crude approximation of the thickness of this deformed unit is 2,500 feet
Upper Cretaceous rocks, undivided (Ku)	Sandstone, fine- to coarse-grained, and shale. Light-gray when fresh, weathers yellowish-brown; fresh rock rarely seen on surface. Some massive sandstone beds, but predominantly alternating beds of sandstone and shale, without any visible distinguishing characteristics of other Cretaceous units. Sheared, fractured, and contorted. May include any of the Upper Cretaceous units and possibly unrecognized Eocene rocks. Fossils rare; part of a spirally-coiled ammonite of probable late Late Cretaceous age found in the south bore of the rapid transit tunnel. Thickness and stratigraphic relations unknown
Serpentine (sp)	Serpentine, pale-greenish-yellow, green, bluish-gray, black, and pale-blue; generally soft and intensely sheared. May include small amounts of Leona Rhyolite and Franciscan Formation too small to show on the map.



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 1 of 1

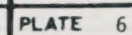
GEOLOGIC MAP

PROJECT 0738-08A

23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 5

APPARENT DIP
OF BEDDING



NORTH WEST

CROSS SECTION B-B'

SCALE: 1" = 20'

SOUTHEAST

0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

1080

1060

1040

1020

1000

980

960

940

PROPOSED ROAD LOCATION

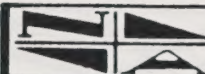
EXISTING
10' SEWER EASEMENT

PROJECTED
T-2

PROJECTED
T-1

TOPSOIL & SUBSOILS

? ? ? ? ?



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 2 OF 2

PROJECT 0738-08A

CROSS SECTION

23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

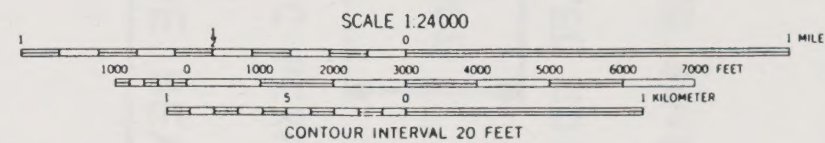
PLATE 6

E-29

VERTICAL
(1" = 20')



GN
 0° 30' 9 MILS
 MN
 184° 293 MILS
 UTM GRID AND 1980 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET



BASE MAP: ALQUIST-PRIOLO SPECIAL STUDIES ZONE MAP,
OAKLAND EAST QUADRAUGLE, 1982.



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

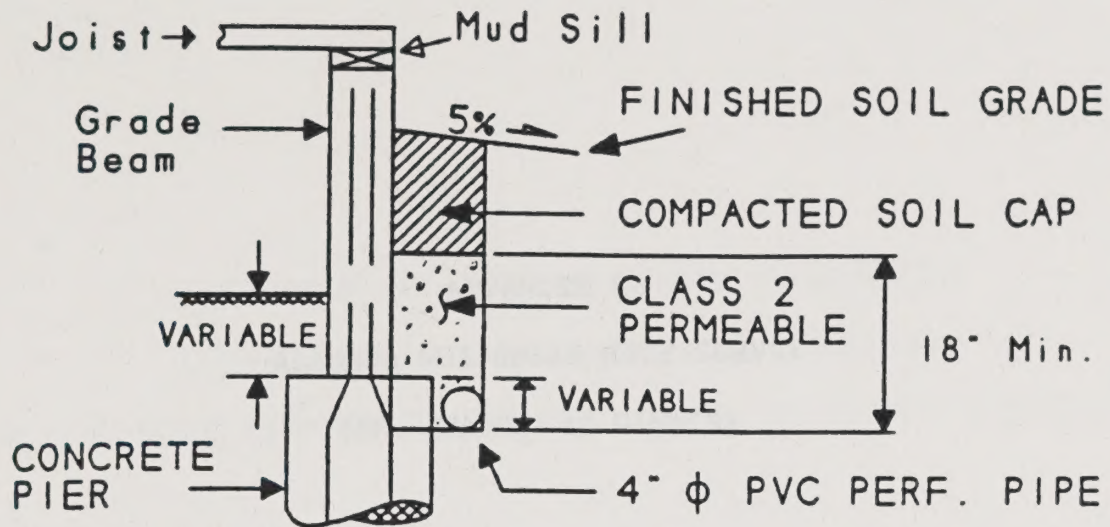
SPECIAL STUDIES ZONE MAP

PROJECT 0738-08A

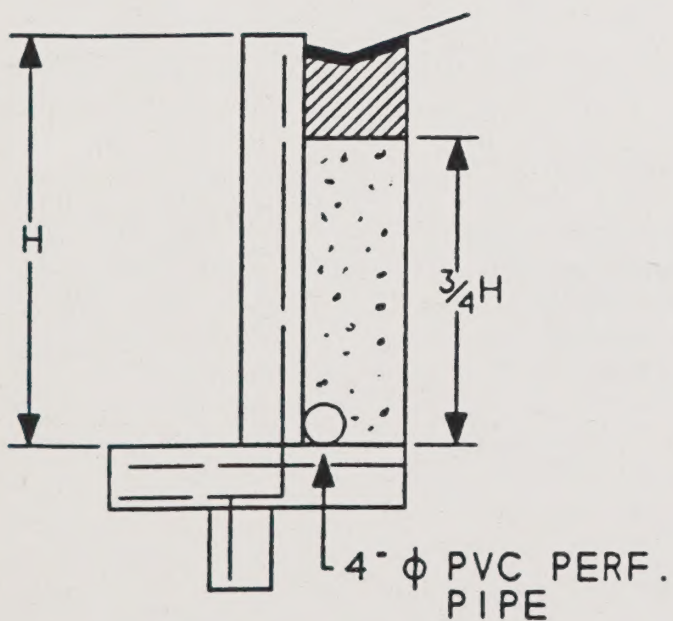
23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

DATE: 02/91
SHEET 1 OF 1

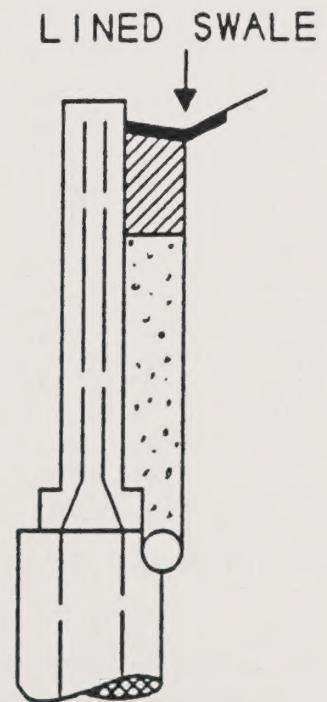
PLATE 7



TYPICAL FOR UPHILL GRADE BEAM



CONVENTIONAL RETAINING WALL



PIER SUPPORTED RETAINING WALL



NORDMO ASSOCIATES, INC.

Geotechnical
Consultants

DATE: 02/91

SHEET 1 OF 1

TYPICAL SUBDRAIN DETAIL

PROJECT 0738-08A

23 LOT SUBDIV., 5858 REDWOOD RD., ALAMEDA CO., CA

PLATE 8

APPENDIX F

ALAMEDA WHIPSNAKE SITE SURVEY

(DR. SAMUEL MC GINNIS)

Earth Development Company
754 Paraiso Avenue
San Francisco, CA 94133

Dr. Samuel R. McGinnis
Biological Consultant
3692 Walton Road
Berkeley, CA 94702
(415) 841-5726

JULY 3, 1991

STATUS OF THE ALAMEDA WHIPSNAKE

(Masticophis masticophis lateralis)

ON A 5.6 ACRE PARCEL ON REDWOOD ROAD, OAKLAND, CALIFORNIA

A Report Prepared For

**Mayer Development Company
753 Peralta Avenue
San Leandro, CA 94577**

By

**Dr. Samuel M. McGinnis
Biological Consultant
9699 Melton Road
Manteca, CA 95336
(209) 599-2726**

July 8, 1992

INTRODUCTION

The Alameda whipsnake is a State listed Threatened and Federal listed Candidate 2 species which occurs sporadically throughout Alameda and Contra Costa Counties. In the East Bay area, nearly all recorded populations occur in the greater Tilden Park area (Figure 1). This clumped distribution appears to be partly a result of the fact that this area has received an unusual amount of observation effort due to the constant presence of park rangers and naturalists and also because of its close proximity to the University of California at Berkeley. South of this area through the Oakland hills observations of the threatened snake have been relatively scarce with only one reported from the Leon Heights Park area half way between Redwood and Keller Roads in 1953 (Record from the Natural Diversity Base, Sacramento).

However, throughout this area there still persists small stands of northern coastal scrub, the preferred plant community of the Alameda whipsnake. This plus the fact that the Oakland hills area appears to have received relatively light biological survey work over the past decades raises the possibility that one or more small populations of the threatened snake could occur there where coastal scrub stands exists. Because of the geographic position of the project site within this area and the fact that it supports a coastal scrub stand, the following study was conducted to determine if the Alameda whipsnake was indeed present on the site and, if so, to what extent would it be impacted by the development proposed for this area.

METHODS AND MATERIALS

The survey for the Alameda whipsnake was conducted using the methodology recently developed by the California Department of Fish and Game for determining the presence or absence of this species. This entailed the placement of nine trapline units (four more than the minimum requirement for a 5 acre parcel) at points adjacent to the coastal scrub community where snakes following the scrub/grassland border could be intercepted (Figure 2). Each trapline consisted of a drift fence 12-16 inches high and 36 to 48 feet long with a CDFG approved funnel trap positioned at each end.

Traps were checked at every day during warm weather and every other day during cool weather spells. During the Memorial Day weekend when both the principal investigator and graduate field assistant were conducting an University trip to the Mojave Desert, the traps were closed for four days. With this one exception, the traplines were in continuous operation from March 25 through June 28, 1992, a total of 810 trap days (one trap day = one complete trapline in place for 24 hours).

All reptile captured were identified and all snakes were marked for individual recognition by clipping the edge of a specific ventral scale. The area was also visually surveyed during each visit by walking transects through the grassland which borders the coastal scrub stands.

RESULTS AND DISCUSSION

Table 1. Reptile species and numbers captured in the project site traplines. Note the relatively high number of snakes and alligator lizards taken on this relatively small site.

Common Name	Scientific Name	Number
Western Yellow-bellied Race	<u>Coluber constrictor mormon</u>	9
Santa Cruz Garter Snake	<u>Thamnophis couchi atratus</u>	6
Pacific Gopher Snake	<u>Pituophis melanoleucus catenifer</u>	3
Pacific Ringneck Snake	<u>Diadophis punctatus amabilis</u>	3
California Alligator Lizard	<u>Gerrhonotus m. multicarinatus</u>	21
Northwestern Fence Lizard	<u>Sceloporus o. occidentalis</u>	1

The most pertinent result of the trapping study is that no Alameda whipsnakes were captured or observed on the project site. However, this relatively small area supports a surprisingly large population of other snake species and the California alligator lizard. Among the snake species captures, the western yellow-bellied racer was by far the most numerous. This is the closest relative of the Alameda whipsnake in the East Bay Area, and its broad prey preferences (lizards, frogs, mice, etc.) overlap the narrow prey choice of the threatened snake (ALMOST exclusively lizards) (Stebbins, 1985; Larsen, et al, 1991). Thus the snake trapping data demonstrates that the traplines were functioning properly and that there also exists a fair degree of competition for the available lizard prey resource.

The composition of the lizard fauna on the site is also instrumental in explaining the absence of the Alameda whipsnake. The preferred prey species of this snake is the northwestern fence lizard, a species which spends much of the day exposed on basking or feeding perched where it be easily seen and captured by the sight-oriented whipsnake. In contrast, the alligator lizard is a secretive form which usually forages within the concealment of dense grass or shrub cover and thus cannot be readily detected by a sight-oriented predator. Recent prey selection experiments have also shown that it can employ two successful defensive behaviors which often prevent it from being consumed by the Alameda whipsnake (Swaim, et al, 1992). Thus that fact that the California alligator lizard is in good abundance on the site does not offset the fact that the snake's preferred prey, the northwestern fence lizard, is nearly absent.

Prey ABUNDANCE is one of four key factors in determining whether or not a site can support the Alameda whipsnake. It is one of four characteristics incorporated into a habitat scoring system for this species (McGinnis & Swaim, 1992). The system and an explanation of its parameters is as follows:

The combined results of the trapping surveys, behavioral studies of radio-telemetered snakes, and prey selectivity experiments led to the formulation of a habitat scoring system for the Alameda whipsnake, patterned after that for the San Francisco garter snake (McGinnis, 1987). The system was devised to rate the general quality of habitat and its potential to support a whipsnake population. The scoring system is based on the four habitat variables:

1) Availability and type of prey present at the site, 2) availability of retreats (burrows, rock outcrops and crevices, and debris), 3) canopy characteristics of the scrub/chaparral community (open vs. closed canopy), and 4) slope exposure of the habitat. Each category is assigned a score ranging from 0 to 3 with 3 designating the best situation for the AW.

Prey Species Abundance: Because the funnel trap/drift fence unit is an efficient means of sampling all small vertebrates in an area, lizard abundance is a by-product of snake trapping surveys. The scores assigned to the three lizard types normally found in the greater Bay Area is based upon the relative ease of capture by whipsnakes. The latter is a sight oriented hunter which specializes in capturing lizard prey. It does this primarily by visual cues and strikes only at the sight of a moving lizard. Because alligator lizards and skinks are relative secretive forms which rarely stray far from protective ground cover, it is the basking, perch-feeding northwestern fence lizard which is most easily seen and captured by the Alameda whipsnake. Therefore good abundance of this species along with one other "buffer species" merits a score of 3, which then declines as fence lizard numbers decline. Capture rates which would indicate good abundance for these species would be approximately one fence lizard per site visit (7-10 traplines) and one other lizard species every other trap check visit.

Retreat Sites: An abundant rock outcrop condition exists when 25 percent or more of the ground surface is covered by rocks and/or boulders as opposed to vegetation (Figure 3). A moderate number of outcrops describes a situation where within one's normal field of vision one to three may be seen while facing each major compass direction. Outcrops are scarce when only one or two occur throughout the immediate study area.

An abundant burrow situation exists when there is approximately one within a six foot radius of the point where the observer is standing. If one must move to four such non-overlapping points in order to view one burrow, this is a moderate abundance condition. Finally, if extensive searching is required to reveal even one burrow system, this would be a scarce situation.

Canopy Characteristics: The coastal scrub and chaparral plant communities appear favorable to the Alameda whipsnake because on one hand a moderately open canopy situation produced numerous patches of sunlight within the stand which permits this heliothermic or sun-loving snake to periodically bask while at the same time protecting it from view by its most common predator: hawks. As the canopy closed in mature stands of scrub or chaparral, the basking advantage within the plant community is lost, and even though greater visual cover is afforded, whipsnakes appear to vacate such areas.

Slope Exposure: This factor determines the ability of both the Alameda whipsnake and its preferred prey, the northwestern fence lizard, to obtain and sustain high enough body temperatures throughout the day in order to conduct their respective critical life processes (Hammerson, 1979). This is especially crucial in spring when this snake species is most active, and thus its marked preference for slopes with a southern exposure.

THE ALAMEDA WHIPSNAKE HABITAT EVALUATION SYSTEM

Category 1: Availability and Type of Prey

- 3 = abundant NFL & 1 other lizard species in moderate abundance.
- 2 = moderate NFL & 1 other lizard species in moderate abundance
- 1 = moderate NFL but other lizard species scarce
- 0 = scarce NFL & scarce other lizard species

Category 2: Retreat Availability

- 3 = abundant rock outcrops & abundant burrows or vice versa
- 2 = abundant rock outcrops; scarce burrows or vice versa
- 1 = moderate burrows & scarce outcrops or vice versa
- 0 = both rock outcrops and burrows scarce or one absent

Category 3: Canopy Characteristics

- 3 = 25-50% open canopy chaparral or coastal scrub
- 2 = 75-90% closed canopy chaparral or coastal scrub
- 1 = 90% or greater closed chaparral or coastal scrub
- 0 = closed canopy atypical shrub community; ie: solid coyote brush or poison oak, etc.

Category 4 = Habitat Slope Exposure

- 3 = south facing slope
- 2 = southeast or southwest facing slope
- 1 = east or west facing slope
- 0 = north facing slope

Point Total Scale and Interpretation

- 11-12 Points: This habitat can and may support a breeding population of the AW
- 9-10 Points: This habitat can also support the AW, but it may not be present in large numbers
- 7-8 Points: This habitat is marginal for the AW, and a site scoring 7 may not support it
- 6 or below: It is highly improbable that this habitat does or can support the AW

At this writing date the AW Habitat Evaluation System has been tested on 21 sites. Twelve of these support Alameda whipsnake and produced scores ranging from 12 to 8, with the higher scores generated at the larger population sites. Three sites scored 7 points, but three months of trapping and observation at each failed to reveal the AW. Scores of 6 should also be considered in this marginal category, but as they decline to 5 or below so many of the key features for the AW are lacking that its absence is an almost certainty. Eight of the study sites were in the 6 or under category, and none produced whipsnakes.

When applied to the project site, the habitat scoring is as follows:

Prey Availability = 1
Retreat Availability = 2
Canopy Characteristics = 2
Slope Exposure = 2

Total Habitat Score = 7

This is a very marginal status which, as previously stated, has as yet to produce an Alameda whipsnake in previous studies.

Obviously, the results of this trapping study bears out this prediction. The main shortcoming of this site appears to be its lack of fence lizards, and this in turn appears to be a result of the rather cool conditions which prevail there throughout much of the spring period during which snake feeding is most critical.

An additional factor is that the amount of coastal scrub on this site (about 2 acres) is less than the smaller home range area documented for this species (Swaim, in press). The site is also not adjacent the areas containing larger stands of higher quality scrub or chaparral habitat, so the project site cannot even be viewed as a secondary marginal habitat for a nearby population.

CONCLUSIONS

1. The Alameda whipsnake does not occur on the Mayer Development Company project site.

2. The relatively low whipsnake habitat score which has been assigned to this site indicates that it could not support an Alameda whipsnake population if indeed wandering individuals should occasionally wander through the property.

LITERATURE USED IN PREPARING THIS REPORT

Hammerson, G. A. 1979. Thermal Ecology of the Striped Racer Masticophis lateralis. Herpetologica 35:267-273.

Larsen, S. S., K. E. Swaim, and S. M. McGinnis. 1991. Innate response of the San Francisco garter snake and the Alameda whipsnake to specific prey items. Trans. West. Sect. of the Wildl. Soc. 27:37-41.

McGinnis, S. M. 1987. The distribution and habitat requirements of the San Francisco garter snake, Thamnophis sirtalis tetrataenia. Unpublished California Department of Fish and Game Report.

_____, and K.E. Swaim. 1992. Habitat requirements and several life history features of the Alameda whipsnake, Masticophis lateralis euryxanthus. Report for California Department of Fish and Game (in preparation).

Stebbins, R.C. 1985. A Field Guide to the Reptiles and Amphibians of Western North America. Houghton Mifflin Co., Boston, Mass.

Swaim, K.E. 1992. The Life History of the Alameda Whipsnake, Masticophis lateralis euryxanthus. Master's Degree Thesis Department of Biology, California State University, Hayward. (in press).

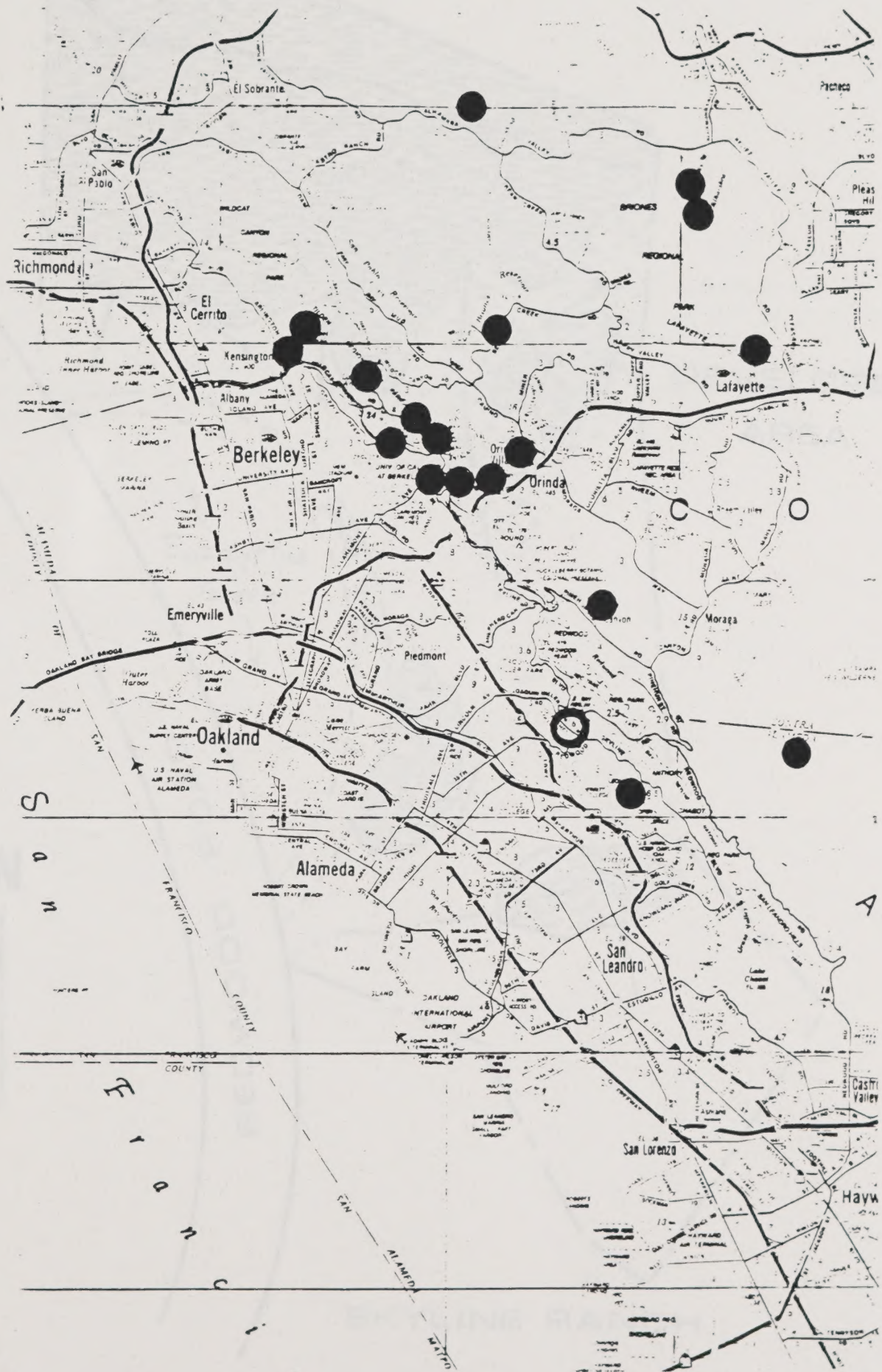


Figure 1. A map of the northern East Bay area showing the present distribution of Alameda whipsnake populations (solid black dots) and the Mayer Development Company project site (open circle). Scale: 1" = 3.3 miles.

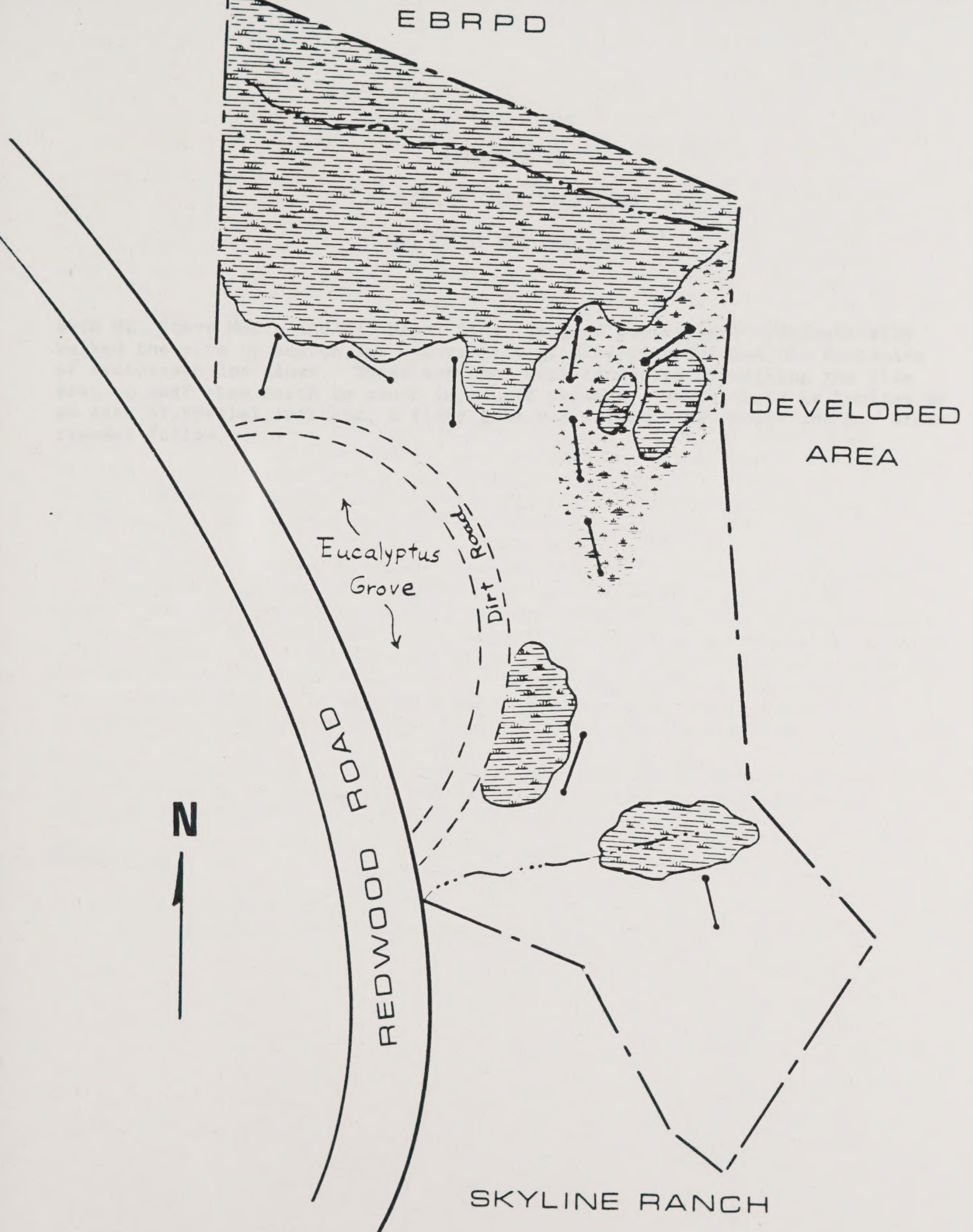


Figure 2. A vegetation cover map of the 5.6 acre project site showing the placement of nine snake traplines = —●—

▨ = dense coastal scrub; ▲ = scrub/grass; clear = grass

APPENDIX F1

BIOLOGIST QUALIFICATIONS

AND STUDY METHODOLOGY

Both Mr. Steve Moore and Ms. Naomi Sims (trained biologists) systematically walked the site to search for occurrences of Burrowing Owl and the manzanita of *Arctostaphylos* genus. These searches were conducted by walking the site east to west then north to south in a grid pattern. Where there is habitat or an area of special interest, a finer grid was walked. Mr. Moore and Ms. Simms resumes follow.

Naomi Sims
Senior Biologist, Project Manager

At CERTIFIED/Earth Metrics, Ms. Sims serves as senior staff biologist and project manager. She is skilled in the preparation of Environmental Impact Reports (EIRs), Environmental Assessments, and biotic surveys. She has worked on San Francisco Bay wetland issues as they pertain to land development impacts as well as impacts to benthic biota of bay dredging. She has been involved in various biological analyses, including systematic site surveys for rare, threatened, and endangered botanical species on a given site, habitat evaluations and mapping, Endangered Species Act Section 7 Biological Assessments, and mitigation planning for sensitive habitats.

As Project Manager, Ms. Sims has prepared EIRs for residential projects, including both hillside and coastal zone projects as well as commercial projects, General Plan Amendments, and rezonings. Recent specific projects include the Cloisters Residential Subdivision Project EIR, Morro Bay; the Holmes Lumberyard Project EIR, Fort Bragg; the Richmond Enterprise Zone EIR, Richmond; and the Skypark Specific Plan EIR, Scotts Valley.

Ms. Sims has experience in agency consultation at the local, county, state, and federal levels. She is familiar with various regional and local regulations that pertain to natural resource protection, such as requirements of the Coastal Zone Management Act, analyses pursuant to Local Coastal Program Land Use Plans, and regulatory policy related to natural resources such as Section 404 of the Clean Water Act and the California State Resources Code. She is experienced in implementing the requirements of the California Environmental Quality Act and the National Environmental Policy Act.

Pursuant to her doctoral thesis research, Ms. Sims has extensive research and field experience in ecological and behavioral analysis with a particular emphasis on wetland wildlife habitat utilization.

EDUCATION:

- Ph.D., Rutgers University
- B.A., Douglass College, Rutgers University

Steven M. Moore
Environmental Analyst
B.Sc., Biological Sciences, Stanford University

At Earth Metrics, Mr. Moore serves as an environmental analyst in the Natural Resources Department, and author of Environmental Impact Reports and Environmental Assessments. Analyses for EIRs have involved assessing the biological impacts and recommending mitigation measures for a variety of development projects, including redevelopment plans, construction projects, and long range General Plans. He has also conducted systematic surveys for the presence of rare or endangered species on a given site. In addition, he is involved in the evaluation of public services and visual and aesthetic impacts of a wide variety of projects. Representative projects include the EIRs for the City of Cotati General Plan, the City of Lakeport General Plan Update and Southwest Lakeport Reorganization Area, the City of Scotts Valley Redevelopment Plan, and the Old Capitol Site Specific Plan in Monterey.

As author and project manager of Environmental Assessments, Mr. Moore is responsible for preparing hazardous material surveys for a variety of land uses. Mr. Moore has experience in agency consultation at the local, County, State and Federal levels. He has ascertained the potential for soil and groundwater contamination and has researched agency records concerning underground storage tank removal and analysis of associated soils. He also has made determinations of the potential for asbestos containing building materials during site investigations, and has performed soil and bulk asbestos sampling.

Mr. Moore received extensive undergraduate training in ecosystem biology. His particular emphases have been botany, plant ecology, marine ecology, and biostatistics. While associated with the Hopkins Marine Station in Pacific Grove, California, he conducted analysis focused on modeling oxygen and phosphate fluxes in tidepool ecosystems. His computer simulation model was used to determine the major physico-chemical and biotic factors controlling ambient oxygen and phosphate concentrations in tidepools. During his residence at Stanford University, Mr. Moore assisted in a three-year project studying potential determinants of the unusual plant diversity found in the serpentine grassland ecosystem. Mr. Moore has also worked for private environmental firms as a research assistant.



U.C. BERKELEY LIBRARIES



C124919500



A **shp** GROUP COMPANY